Administrative Draft Initial Study/Mitigated Negative Declaration (IS/MND)

Project Name

Lead Agency:
California Department of Conservation
Geologic Energy Management Division
CEQA Unit
715 P Street, MS 18-03
Sacramento, California 95814

Prepared by:
Preparer

date

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1. Air Quality and Greenhouse Gas Emissions TABLES
2. Biological Technical Report
3. Archeological Study Report And Archeological Records Search

LIST OF ACRONYMS

µg/m^3	Micrograms per Cubic Meter
µPa	microPascals
AADT	Annual Average Daily Traffic
AB	Assembly Bill
ALUCP	Airport Land Use Compatibility Plan
ANSS	Advances National Seismic System
AOR	Area of Review
APCO	Air Pollution Control Officer
API	American Petroleum Institute
ARPA	Archaeological Resources Protection Act of 1979
ASME	American Society of Mechanical Engineers
ATC	Authority to Construct
AWWA	American Water Works Association
BOEPD	Barrels of oil equivalent per day
BLM	Bureau of Land Management
BMPs	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CalGEM	California Division of Geologic Energy Management
CalOES	California Office of Emergency Services
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CASGEM	California Statewide Groundwater Elevation Monitoring
CBS	California Building Code
CCAA	California Clean Air Act
CCAP	Climate Change Action Plan
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGOPR	California Governor's Office of Planning and Research
CGS	California Geological Survey
CH_4	Methane
CIP	Capital Improvement Plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Level Equivalent
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide equivalents
COG	Council of Governments
CRHR	California Register of Historical Resources
CTR	California Toxics Rule
CUPAs	Certified Unified Program Agencies
CVRWQB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dB	Decibels
DOSH	State of California Department of Industrial Relations, Division of Occupational Safety and Health
DOT	United States Department of Transportation
DPM	Diesel Particulate Matter
DPR	California Department of Pesticide Regulation
DWR	Department of Water Resources
EIR	Environmental Impact Report
EMFAC	Emissions Factor Model
EOP	Emergency Operations Plan
EPA	United States Environmental Protection Agency
ESA	Environmentally Sensitive Area
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency

FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
Fwko	Free Water Knock-Out
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
GHG	Greenhouse Gas
GHS	United Nations Globally Harmonized System of Classification and Labeling of Chemicals
GSA	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plan
H_2S	Hydrogen Sulfide
HMBP	Hazardous Materials Business Plan
hp	Horsepower
I&M	Inspection and maintenance
iPac	(USFWS) Information for Planning and Conservation
IPCC	Intergovernmental Panel on Climate Change
IS/MND	Initial Study/Mitigated Negative Declaration
KCFD	Kern County Fire Department
kWh	Kilowatt hour
LDAR	Leak Detection and Repair
Ldn	Day-Night Average Sound Level
LED	Light-Emitting Diode
Leq	Energy Equivalent Sound Level
Leq(h)	Energy Equivalent Sound Level occurring during one hour
Lmax	Maximum Sound Level
LUST	Leaking Underground Storage Tank
Lxx	Percentile-Exceeded Sound Level
M	meters
M&I	Municipal and Industrial Water
MATES IV	Multiple Air Toxics Exposure Study in the South Coast Air Basin
MBTA	Migratory Bird Treaty Act
Mg/L	Milligram per liter
MMS	Mineral Management Service

MOA	Memorandum Agreement
MPO	Metropolitan Planning Organization
$MTCO_2E$	Million Tons of Carbon Dioxide Equivalent
MWh	Megawatt hours
MWSS	Midway Sunset
N/A	Not applicable
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NAWS	Naval Air Weapons
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEES	Network for Earthquake Engineering Simulation
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NIST	National Institute of Standards and Technology
NMFS	National Marine Fisheries Service
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NO_x	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
O_3	Ozone
OCMP	Odor Complaint Management Plan
OHP	California Office of Historic Preservation
OPA	Oil Pollution Act
OPS	Office of Pipeline Safety

OSHA	Occupational Safety and Health Administration
PBS	Performance Based Standards
PBSD	Performance-Based Seismic Design
PERP	Portable Equipment Registration Program
PHMSA	Pipeline and Hazardous Material Safety Administration
PL	Public Law
PM	Particulate Matter
PM_{10}	Particulate Matter of 10 Microns or Less
$PM_{2.5}$	Particulate Matter of 2.5 Microns or Less
Ppm	parts per million
PPV	Peak Particle Velocity
PTO	Permit to Operate
PWSP	Project Work and Safety Plan
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation Recovery Act
RHNA	Regional Housing Needs Allocation
RMP	Risk Management Plan
Rms	microPascals
ROGs	Reactive Organic Gases
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCS	Sustainable Communities Strategies
SDWA	Federal Safe Drinking Water Act
SHPO	California State Historic Preservation Officer
SJAS	San Joaquin Antelope Squirrel
SJKF	San Joaquin Kit Fox
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SMARA	Surface Mining and Reclamation Act of 1975
SO_2	Sulfur Dioxide
SR	State Route

SRA	State Responsibility Areas
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TDS	Total Dissolved Solids
TEOR	Thermally Enhanced Oil Recovery
TES	Threatened or Endangered Species
TOCs	Total Organic Compounds
UBC	Uniform Building Code
UIC	Underground Injection Control
USACE	Unites States Army Corps of Engineers
USFS	U.S. Forest Service
USFWS	Unites States Fish and Wildlife Service
USGS	United States Geological Survey
VdB	Intermittent Sources Vibration Velocity
VFD	Variable Frequency Drive
VMT	Vehicle Miles Traveled
WEAP	Worker Environmental Awareness Program

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

1.0 INTRODUCTION

Introduce the Project. Include the following:

1. Figure 1-1 showing the Project location
    a. Include date of map and aerial
    b. North arrow and scale
    c. Alternative text
    d. Project location relative to major roadways and communities

Project Name:

xxx

Lead Agency Name and Address:

California Department of Conservation, California Geologic Energy Management Division (CalGEM)
715 P Street, MS 1803, Sacramento, California 95814

Contact Person, Phone Number, and Email Address:

xxx

Project Proponent Name and Address:

xxx

Project Description and Purpose:

This Project involves xxxx. A detailed Project description is provided in Section 2.0 below.

Project Location:

The Project area encompasses approximately xxx acres within the xxx oil field in the unincorporated portion of xxx County. The Project area is generally bounded by xxx Road to the south, xxx Road to the north, xxx Road to the east and xxx Road to the west. The closest the community is xxxx and the closest residential receptors to the Project site is xxxx.

2.0 PROJECT DESCRIPTION

Include the following information in the Project Description. Please refer to the CalGEM CEQA Project Description Guidance for operators.

1. County
2. Oil Field
3. CalGEM District
4. Note status of PAL (if applicable), Pal update or AOR review if new wells or confirm existing PAL includes proposed project wells
2. Provide PAL as appendix
3. Statement of objectives sought by the project
4. Provide figure showing project location
5. Provide figure showing equipment layout on well pad(s)
6. Provide information on lighting and shielding
7. Construction equipment used, timing, etc
8. Operational equipment used, and in relation to existing facilities.
9. Distance to nearest water body
10. Distance to nearest receptor (residence, school, etc.)
11. Management of the produced fluids (pipeline, trucking, etc.)

Figure 2-1. Project Location

2.1 WELL CONSTRUCTION COMPONENTS

Form ID	Well ID	Well Type	Well API (if applicable)	Proposed Well Location (Pad)	Well Latitude	Well Longitude

A project may cover a single or multiple NOIs. If one project description is intended to cover multiple NOIs, include all wells associated with the proposed project.

Table 2-1 . Well Listing

Well Pad	Wells on Well Pad	New or Existing Well Pad	Total Acres of Well Pad Footprint	Total Acres of New Pipeline & Electrical Line Footprint	Acres of Habitat Disturbance
TOTAL					

Table 2-2. Well Site Preparation Disturbance Acreages

2.2 DRILLING OPERATIONS (IF APPLICABLE)

Figure 2-2. Drill Site Plan

2.3 PROJECT OPERATIONS

2.3.1 Operational Support Equipment

2.3.2 Operational Life and Maintenance Activities

2.4 APPLICABLE AGENCY REQUIREMENTS

2.4.1 Project Approvals and Permits Under CEQA

Agency	Permit/Approval
Federal	
United States Bureau of Land Management Sundry Notices	Sundry Notice for wells located within Federal leases
State	
State Water Resources Control Board (SWRCB)	Construction Stormwater Pollution Prevention Plan

Agency	Permit/Approval
California Geologic Energy Management Division (CalGEM)	Drilling permit
SWRCB in Coordination with CalGEM	
Local	
Air Pollution Control District	Authority to Construct Permits Current Permit to Operate

Table 2-3. Project Approvals and Permits

3.0 SUMMARY OF FINDINGS

3.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

This Project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Potentially Significant Unless Mitigation Incorporated" as indicated by the checklist on the following pages.

☒ Aesthetics	☒ Agriculture and Forest Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Energy
☒ Geology and Soils	☒ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials
☒ Hydrology and Water Quality	☒ Land Use and Planning	☒ Mineral Resources
☒ Noise	☒ Population and Housing	☒ Public Services
☒ Recreation	☒ Transportation	☒ Tribal Cultural Resources
☒ Utilities and Service Systems	☒ Wildfire	☒ Mandatory Findings of Significance

Table 3-1. Environmental Issues and Potentially Significant Impacts

3.2 ENVIRONMENTAL DETERMINATION

☐ On the basis of this initial evaluation: I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by

mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

_____ _____
Signature *Date*

_____ _____
Printed Name *Agency*

4.0 ENVIRONMENTAL ANALYSIS AND INITIAL STUDY CHECKLIST

The evaluation of environmental impacts provided in this Initial Study is based in part on the impact questions contained in Appendix G of the State CEQA Guidelines; these questions, which are included in an impact assessment matrix for each environmental category (Aesthetics, Agriculture/Forest Resources, Air Quality, Biological Resources, etc.), are "intended to encourage thoughtful assessment of impacts." Each question is followed by a check-marked box with column headings that are defined below.

Potentially Significant Impact. This column is checked if there is substantial evidence that a Project-related environmental effect may be significant. If there are one or more "Potentially Significant Impacts," a Project Environmental Impact Report (EIR) would be prepared.

Less than Significant with Mitigation. This column is checked when the Project may result in a significant environmental impact, but the incorporation of identified Project revisions or mitigation measures would reduce the identified effect(s) to a less than significant level.

Less than Significant Impact. This column is checked when the Project would not result in any significant effects. The Project's impact is less than significant even without the incorporation of Project-specific mitigation measures.

No Impact. This column is checked when the category does not apply.

Detailed descriptions and analyses of impacts from Project activities and the basis for significance determinations are provided for each environmental factor on the following pages.

4.1 AESTHETICS

AESTHETICS – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☐

4.1.1 Environmental Setting

Describe the following:

1. Site location
2. Closest sensitive receptor
3. Closest state designated scenic route
4. Existing conditions: industrial equipment, vegetation, hills, terrain
5. Any other scenic resources, outcroppings, tree removal, historical buildings, conflict with zoning
6. Operational lighting i.e. 24 hrs/day? Location of lighting.

4.1.2 Regulatory Setting

There are no Federal or State regulations, laws, or policies pertaining to aesthetics relevant to the Project. Local regulations, laws, and policies pertaining to aesthetics relevant to the Project are included below.

4.1.2.1 Federal and State Regulations

4.1.2.2 Local

Example:

Kern County General Plan (2009)

Chapter 1: Land Use, Conservation, and Open Space Element

1.8. Industrial

Policy 6: Encourage upgrading the visual character of existing industrial areas through the use of landscaping, screening, or buffering.

1.10. General Provisions

1.10.7. Light and Glare

Policy 47: Ensure that light and glare from discretionary new development projects are minimized in rural as well as urban areas.
Policy 48: Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties.

4.1.3 Impact Analysis

a) Have a substantial adverse effect on a scenic vista?

Impact Level.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Impact Level.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impact Level.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Impact Level.

4.1.4 Mitigation Measures

List mitigation measures if applicable

4.2 AGRICULTURE AND FORESTRY RESOURCES

AGRICULTURE AND FORESTRY RESOURCES – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Project of the California Natural Resources Agency, to non-agricultural use?	☐	☐	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220, subd. (g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104, subd. (g))?	☐	☐	☐	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☐
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?	☐	☐	☐	☐

4.2.1 Environmental Setting

Discuss:

1. Williamson act areas
2. Farmland mapping (Prime, unique, farmland of statewide importance)
3. Rezoning of forest land, zoned timberland

4. California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.
5. 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 the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

4.2.2 Regulatory Setting

There are no Federal or State regulations, laws or policies pertaining to agriculture and forestry that are applicable to the proposed Project. Local regulations, laws, and policies pertaining to agriculture and forestry resources relevant to the Project are included below.

4.2.2.1 Federal and State Regulations

4.2.2.2 Local

Example:

Kern County General Plan (2009)

Chapter 1: Land Use, Conservation, and Open Space Element

1.9. Resource

Policy 11: Minimize the alteration of natural drainage areas. Require development plans to include necessary mitigation to stabilize runoff and silt deposition through utilization of grading and flood protection ordinances.

Policy 15: Agriculture and other resource uses will be considered a consistent use in areas designated for Mineral and Petroleum Resource uses on the General Plan.

4.2.3 Impact Analysis

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

Impact Level.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Impact Level.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220, subd. (g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104, subd. (g))?

Impact Level.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

Impact Level.

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?

Impact Level.

4.2.4 Mitigation Measures

List mitigation measures if applicable

4.3 AIR QUALITY

AIR QUALITY – Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☐
b) 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?	☐	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☐

4.3.1 Environmental Setting

In Air Quality, discuss the following:

1. Operational emissions quantify: stationary and mobile sources
2. Construction emissions quantify: stationary and mobile sources
3. Provide detailed spreadsheet calcs or CalEEMod calcs
4. Increases in production levels and resulting emissions at existing equipment
5. Odor issues: distance to receptor and/or complaint history provided

In environmental setting, discuss:

1. Climate

2. Predominant wind direction
3. Distance to closest receptor: residence, worker
4. Current operations and existing permits

4.3.1.1 Air Pollutants

The primary chemical compounds that are considered air pollutants emitted into or formed in the atmosphere include criteria pollutants (ozone [O_3], oxides of nitrogen [NO_X], sulfur dioxide [SO_2], reactive organic compounds [ROG], carbon monoxide [CO], and particulate matter [PM]) and Toxic Air Contaminants (TACs).

4.3.1.2 Criteria Pollutants

Criteria air pollutants are those contaminants for which ambient air quality standards have been established for the protection of public health and welfare. Criteria pollutants include O_3, CO, NO_X, ROG, SO_2, and PM.

Ozone (O_3). O_3 is formed in the atmosphere through complex photochemical reactions involving NO_X, ROG (also known as reactive organic compounds), and sunlight that occur over several hours. Since O_3 is not emitted directly into the atmosphere but is formed as a result of photochemical reactions, it is classified as a secondary or regional pollutant. These O_3-forming reactions take time; therefore, peak ozone levels are often found downwind of major source areas. O_3 is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma, and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at the greatest risk from ozone exposure.

Carbon Monoxide (CO). CO is primarily formed through the incomplete combustion of organic fuels. Higher CO values are generally measured during winter when dispersion is limited by morning surface inversions. Seasonal and diurnal variations in meteorological conditions lead to lower values in summer and in the afternoon. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues, which can cause health effects to those with cardiovascular disease and can affect mental alertness and vision.

Nitric Oxide (NO). NO is a colorless gas formed during combustion processes which rapidly oxidizes to form nitrogen dioxide (NO_2), a brownish gas.

The highest nitrogen dioxide values are generally measured in urbanized areas with heavy traffic. Exposure to NO_2 may increase the potential for respiratory infections in children and cause difficulty in breathing even among healthy persons and especially among asthmatics.

Sulfur Dioxide (SO_2). SO_2 is a colorless, reactive gas that is produced from burning sulfur-containing fuels, such as coal and oil, as well as by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause the narrowing of the airways, leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate the existing cardiovascular disease.

Particulate Matter. Ambient air quality standards have been set for particulate matter with a diameter of 10 microns or less (PM_{10}) and particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$). Both consist of different types of particles suspended in the air, such as metal, soot, smoke, dust, and fine mineral particles. The particles' toxicity and chemical activity can vary, depending on the source. The primary source of PM_{10} emissions appears to be from the soil via road use, construction, agriculture, and natural windblown dust; other sources include sea salt, combustion processes (such as those in gasoline or diesel vehicles), and wood burning. Primary sources of $PM_{2.5}$ emissions come from construction sites, wood stoves, fireplaces, and diesel truck exhaust. Particulate matter is a health concern because when inhaled it can cause permanent lung damage. While both sizes of particulates can be dangerous when inhaled, $PM_{2.5}$ tends to be more damaging because it remains in the lungs.

4.3.1.3 Toxic Air Contaminants

Over 800 substances have been identified by the U.S. Environmental Protection Agency (EPA) and the CARB that are emitted into the air and may adversely affect human health. Due to the cancer risk associated with exposure to diesel particulate matter (DPM), this substance has been targeted for risk reduction by the CARB.

The combustion of diesel fuel in truck engines (as well as other internal combustion engines) produces exhaust containing a number of compounds that have been identified as hazardous air pollutants by EPA, and as TACs by the CARB. DPM from diesel exhaust has been identified as a TAC. The Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV) indicates DPM is a major contributor to cancer risk in southern California associated with TACs, accounting on average for 68 percent of the total risk (South Coast Air Quality Management District, 2015). NOx and DPM are currently controlled through the

use of selective catalytic reduction control systems and diesel exhaust fluid, respectively on all new diesel trucks and heavy equipment. In addition, fleets of older trucks are required to phase in the installation of exhaust particulate filters. CARB maintains the Portable Equipment Registration Program (PERP). The program is a voluntary program that allows an equipment owner to register portable equipment such as drilling rigs and generators with CARB. Each air district determines the type of portable equipment that needs to obtain a permit. An owner or operator of portable equipment that needs a permit for the operation of the equipment at a given location may also register in PERP in lieu of having to get a permit from the air districts for operation at other locations.

Sources of TACs in the Project region include mobile sources (motor vehicles, trains, equipment) and stationary sources such as dry cleaners (perchloroethylene emissions) and gasoline dispensing stations (vapor emissions of benzene and other components of gasoline).

4.3.1.4 Existing Facility Air Permits

Discuss existing air permits with the local air districts.

4.3.2 Regulatory Setting

Federal, State, and local regulations, laws and policies pertaining to air quality relevant to the Project are included below.

4.3.2.1 Federal and State

The EPA has jurisdiction under the Federal Clean Air Act (FCAA) and its amendments. The CARB has jurisdiction under the California Clean Air Act (CCAA) and California Health and Safety Code. The EPA and CARB classify an area as attainment, unclassified, or non-attainment, depending on whether the monitored ambient air quality data show compliance, insufficient data to determine compliance, or non-compliance with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), (CARB, 2023b), respectively.

The EPA established NAAQS to protect public health (primary standards) and welfare (secondary standards). Air basins are classified by the EPA as in "attainment" or "non-attainment" based on meeting the NAAQS. The CARB established the more stringent CAAQS, which also requires air basins to be

designated as in "attainment" or "non-attainment" based on meeting the CAAQS. NAAQS and CAAQS have been established for O_3, CO, NO_2, SO_2, suspended particulate matter (e.g., dust) and lead (refer to Table 4.3-1). In addition, California has standards for Hydrogen Sulfide (H_2S), sulfates, and visibility-reducing particles. Table 4.3-1 lists applicable ambient air quality standards.

Pollutant	Averaging Time	California Standard	Federal Standard
Ozone (O_3)	1-Hour	0.09 ppm	--
Ozone (O_3)	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	1-Hour	20 ppm	35 ppm
Carbon Monoxide (CO)	8-Hour	9.0 ppm	9 ppm
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm
Nitrogen Dioxide (NO_2)	1-Hour	0.18 ppm	100 ppb
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	--	0.030 ppm
Sulfur Dioxide (SO_2)	24-Hour	0.04 ppm	0.14 ppm
Sulfur Dioxide (SO_2)	3-Hour	--	0.5 ppm (secondary)
Sulfur Dioxide (SO_2)	1-Hour	0.25 ppm	75 ppb
Respirable Particulate Matter (PM_{10})	Annual Geometric Mean	20 µg/m^3	--
Respirable Particulate Matter (PM_{10})	24-Hour	50 µg/m^3	150 µg/m^3
Fine Particulate Matter ($PM_{2.5}$)	Annual Geometric Mean	12 µg/m^3	12.0 µg/m^3
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	--	35 µg/m^3
Hydrogen Sulfide (H_2S)	1-Hour	0.03 ppm	--
Vinyl Chloride	24 Hour	0.01 ppm	--
Sulfates	24 Hour	25 µg/m^3	--

Pollutant	Averaging Time	California Standard	Federal Standard
Lead	30 Day Average	1.5 µg/m^3	--
Lead	Calendar Quarter	--	1.5 µg/m^3
Lead	Rolling 3-Month Average	--	0.15 µg/m^3
Visibility Reducing Particles	8-Hour	Extinction coefficient of 0.23 per kilometer – visibility of 10 miles or more due to particles when relative humidity is less than 70 percent.	--
Notes: µg/m^3 – micrograms per cubic meter ppm – parts per million			

Source: CARB, 2023b and U.S. EPA, 2023

Table 4.3-1. Ambient Air Quality Standards (State and Federal).

4.3.2.2 Local

Example

Kern County General Plan (2009)

Chapter 5: Energy Element

5.3. Petroleum Resources and Development

5.3.6. Environmental Impacts of Petroleum Development

Policy 3: The County should encourage the use of clean-burning technologies in petroleum production.

Policy 5: The County should encourage air pollution control policies which apply the burden equally to local and upwind sources and to all classes of air polluters.

At the local level, the SJVAPCD regulates stationary sources of air pollution within the SJVAB.

SJVAPCD Rules and Regulations. The following SJVAPCD rules and regulations may be applicable to the Project:

Regulation I Rule 1020 and 2201 – Definitions – The purpose of this rule is to define certain words used in these regulations. The following definitions are applicable to the Project:

Major Source. A major source is a stationary source with emissions equal to or exceeding one or more of the following threshold values listed in Table 4.3-2.

Pollutant	(Pounds/Year)
NO_x	20,000
ROG	20,000
SO_x	140,000
PM_{10}	140,000
$PM_{2.5}$	140,000
CO	200,000

Source: SJVAPCD, 2023d

Table 4.3-2. SJVAPCD Air Quality Thresholds of Significance for Major Sources

Source Operation. The last operation preceding the emission of any air contaminant, which results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, as in the case of combustion of fuels; and is any operation, article, machine, equipment or other contrivance.

Regulation II Rule 2010 – Permits Required. – The purpose of this rule is to require any person constructing, altering, replacing or operating any source operation which emits, may emit, or may reduce emissions to obtain an Authority to Construct (ATC) or a Permit to Operate (PTO).

The provisions of this rule shall apply to any person who plans to or does operate, construct, alter, or replace any source operation which may emit air contaminants or may reduce the emission of air contaminants.

Regulation II Rule 2020 – Exemptions. The following exemptions apply to the Project area:

New emissions sources that do not interfere with the attainment status or cause air emissions that would exceed significance thresholds listed in Table 4.3-3 below do not require an ATC or PTO.

Regulation II Rule 2201 – New and Modified Stationary Source Review Rule. The purpose of this rule is to provide for the review of new and modified Stationary

Sources of air pollution and to provide mechanisms including emission trade-offs by which ATC for such sources may be granted, by verifying that the source would not interfere with the attainment status or cause air emissions that would exceed significance thresholds.

Modeling used for the purposes of determining the emissions of a new or modified stationary source is required to be consistent with the requirements contained in the most recent edition of EPA's "Guideline on Air Quality Models" or models approved by CARB and the SJVAPCD.

Regulation II Rule 2260 – Registration Requirement for Equipment Subject to California's Oil and Gas Regulation. The purpose of this rule is to provide a registration mechanism that satisfies the requirements of and will ensure compliance with California's Oil and Gas Regulation. This Rule is discussed in detail in *Section 3.8 Greenhouse Gas Emissions.*

Regulation IV Rule 4101 – Visible Emissions. A person shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines; and

Of such opacity as to obscure an observer's view to a degree equal to or greater than the smoke described above.

Regulation IV Rule 4102 – Nuisance. 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.

Regulation IV Rule 4201 and 4202 – Particulate Matter Concentration and Emission Rate. Rule 4201 sets a standard maximum of 0.1 grain per cubic foot of gas at dry standard conditions for PM emissions. This rule applies to any source operation that emits dust, fumes, or total suspended PM. Establishes allowable emissions rates for PM. Rule 4202 requires any source operation that may emit PM emissions to meet the standards set forth in the table "Allowable Emission Rate Base on Process Weight Rate."

Regulation IV Rule 4401 – Steam-Enhanced Crude. Oil Production Wells. This rule sets the requirement to recover all gases from all new oil and gas wells. Gases

released during planned or unplanned operations from new wells used for delineation and monitoring purposes are exempt.

Regulation IV Rule 4409 – Components at Light Crude Oil Production Facilities, Natural Gas Production Facilities, and Natural Gas Processing Facilities. Limits the emissions of volatile organic compounds from component leaks at light crude oil (oil with an American Petroleum Institute (API) gravity greater than 20) production facilities, natural gas production facilities, and natural gas processing facilities.

Regulation IV Rule 4801 – Sulfur Compounds. Sets limits for the emission of sulfur compounds. Requires that a person shall not discharge sulfur compounds in concentrations exceeding 0.2 percent by volume calculated as SO2 on a dry basis averaged over 15 consecutive minutes per the EPA Method 8 and CARB method 1-100.

Regulation VIII Rule 8011 – General Requirements

Fugitive Dust Suppression Requirements

Materials used for chemical or organic stabilization of soils, including petroleum resins, asphaltic emulsions, acrylics, and adhesives shall not violate State Water Quality Control Board standards for use as a soil stabilizer. Materials accepted by the CARB and the EPA, and which meet State water quality standards, shall be considered acceptable to the Air Pollution Control Officer (APCO).

Any material prohibited for use as dust suppressant by the EPA, the CARB, or other applicable law, rule, or regulation is also prohibited. Use of hygroscopic materials may be prohibited by the APCO in areas lacking sufficient atmospheric moisture of soil for such materials to effectively reduce fugitive dust emissions. Approval to use hydroscopic materials must be approved by the APCO.

Any use of dust suppressants or gravel pads, and paving materials such as asphalt or concrete for paving, shall comply with other applicable SJVAPCD Rules.

Recordkeeping Requirements

Records and supporting documents to demonstrate compliance with the requirements of the rules under Regulation VIII shall be maintained only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's

dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. Records shall be made available to the APCO upon request.

Regulation VIII Rule 8021 – Construction, Demolition Excavation, Extraction, and Other Earthmoving Activities. Limits the emissions of fugitive dust from construction, demolition, excavation, extraction, and other earthmoving activities by implementation of the following required control measures that are applicable to the Project:

Pre-water site sufficiently to limit visible dust emissions to 20 percent or less opacity;

During active operations apply water, chemicals and/or organic stabilizers and suppressants to limit visible dust emissions to 20 percent or less opacity;

Phase work to reduce the amount of disturbed surface area at any one time;

In conjunction construct and maintain wind barriers sufficient to limit visible dust emissions to 20 percent opacity or less;

Apply water, chemical and/or organic stabilizers and suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit visible dust emissions to 20 percent opacity or less to appropriately stabilize unpaved road surfaces;

During site inactivity restrict vehicular access to the area. Apply water, chemicals and/or organic stabilizers and suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acres or more of disturbed surface area remains unused for seven or more days, the area must comply with the conditions for a stabilized surface;

Limit the speed of vehicles traveling on unpaved access or haul roads within the Project area to a maximum of 15 miles per hour;

Post speed limit signs that meet State and Federal Department of Transportation standards at each Project area entrance. At a minimum, speed limit signs shall also be posted at least every 500 feet and shall be readable in both directions of travel along unpaved access haul roads; and

Cease outdoor construction, excavation, extraction, and other earthmoving activities that disturb the soil whenever visible dust emissions exceed

20 percent opacity. Continue application of water, chemicals and/or organic stabilizers and suppressants unless unsafe to do so.

Regulation VIII Rule 8021 – Bulk Materials. No person shall perform any outdoor handling, storage, and transport of bulk materials unless the appropriate requirements in Table 8031-1 of this rule are sufficiently implemented to limit visible dust emissions to 20 percent or less opacity or to comply with the conditions for a stabilized surface as defined in Rule 8011.

Regulation VIII Rule 8041 –Track Out. The operator shall sufficiently prevent, or cleanup track out each day of operations by use of the following measures:

Manually sweeping and picking up track out; or

Operating a rotary brush or broom accompanied or preceded by sufficient wetting to limit visible dust emissions to 20 percent opacity or less; or

Operating a PM_{10} efficient street sweeper that has a pick-up efficiency of at least 80 percent; or

Flushing with water, if curbs or gutters are not present and where the use of water will not result as a source of track out material or result in adverse impacts on storm water drainage systems or violate any National Pollutant Discharge Elimination System (NPDES) permit program.

SJVAPCD Air Quality Plans. The SJVAPCD has adopted air quality control plans to attain the NAAQS and CAAQS for O_3 and PM. The adopted plans are described below:

PM_{10} Maintenance Plan. The maintenance plan was adopted by the SJVAPCD in 2007. This plan demonstrated that the SJVAB will meet the PM_{10} NAAQS. In 2008 the EPA designated the SJVAB as in attainment for the PM_{10} NAAQS (SJVAPCD, 2007).

2008 $PM_{2.5}$ Plan. The 2008 $PM_{2.5}$ Plan was adopted by the SJVAPCD in 2008. This plan estimated that the SJVAB would meet the $PM_{2.5}$ NAAQS by 2014 (SJVAPCD, 2008). The EPA partially approved the plan in 2012.

2012 $PM_{2.5}$ Plan. This plan was adopted by the SJVAPCD in 2012. The plan estimated that the SJVAB would meet the 2006 $PM_{2.5}$ 24-hour NAAQS of 35 micrograms per cubic meter ($\mu g/m^3$) by 2019 (SJVAPCD, 2012). The EPA partially approved the plan in 2016.

2015 $PM_{2.5}$ Plan. This plan was adopted by the SJVAPCD in 2012. The plan estimated that the SJVAB would meet the 1997 $PM_{2.5}$ NAAQS by 2014 (SJVAPCD, 2015a). The EPA partially approved the plan in 2016. Attainment for the 1997 $PM_{2.5}$

NAAQS was not achieved; therefore, the EPA found that the attainment deadline of 2016 was not met.

2016 Ozone Plan. In 2016 the SJVAPCD adopted the 2016 Ozone Plan. This plan lays out the strategy to attain the 8-hour O_3 NAAQS and CAAQS by removing 207.7 tons per day of NO_x emissions from mobile and stationary sources in the SJVAB (SJVAPCD, 2016b). CARB approved the plan on July 21, 2016.

2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard. The SJVAPCD adopted this plan in 2016. The plan requested that the EPA reclassify the SJVAB from moderate non-attainment to serious non-attainment for the 2012 $PM_{2.5}$ NAAQS due to the impracticability of attaining the NAAQS (SJVAPCD, 2016a).

2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards. The 2018 Plan was adopted by the SJVAPCD in 2018 and was partially approved by the EPA in 2020. This plan addresses the 1997 annual $PM_{2.5}$ NAAQS of 15 µg/m³ and 24-hour $PM_{2.5}$ NAAQS of 65 µg/m³; the 2006 24-hour $PM_{2.5}$ NAAQS of 35 µg/m³; and the 2012 annual $PM_{2.5}$ NAAQS of 12 µg/m³. This plan demonstrates that the attainment of the $PM_{2.5}$ NAAQS can be achieved expeditiously (SJVAPCD, 2018).

2022 Plan for the 2015 8-Hour Ozone Standard. In 2022 the SJVAPCD adopted the 2022 Ozone Plan. This plan lays out the strategy to attain the 8-hour O_3 NAAQS. The plan indicates that aggressive control strategies will reduce NOx emissions by 72% between 2018 and 2037, contributing to the Valley's progress toward attainment of the 2015 8-hour ozone standard. Rules for Leak Detection and Repair (LDAR) in the oil and gas sector may be strengthened through potential enhancements currently under consideration, including lower leak thresholds, more frequent LDAR inspections and new leak detection technologies. LDAR rule development is expected to be completed between 2023 and 2024 (SJVAPCD, 2022).

2023 Maintenance Plan and Redesignation Request. This plan indicates that the district has continued to remain in attainment of the 1-hour ozone NAAQS in subsequent years and provided supplementary data to the EPA for the years 2020-2022 to demonstrate continued attainment through enforceable regulations (SJVAPCD, 2023a).

SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts. The SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) (SJVAPCD, 2015b) includes adopted significance thresholds for short-term projects (construction) and long-term projects (operational) air pollutant emissions (Table 4.3-3).

Per the GAMAQI, a project would be considered to have a significant impact to air quality if the project's emissions would result in an exceedance of the significance threshold or contribute to a net increase in a pollutant that the SJVAB is designated as in non-attainment.

Pollutant/Precursor	Construction Emissions (Tons/Year)	Operational Emissions* (Tons/Year)
NO_x	10	10
ROG	10	10
SO_x	27	27
PM_{10}	15	15
$PM_{2.5}$	15	15
CO	100	100

Source: SJVAPCD, 2015b.
Note: * - Permitted and Non-Permitted Sources or Activities.

Table 4.3-3. SJVAPCD Air Quality Thresholds of Significance

4.3.2.3 Current Air Basin Attainment Status

The location districts share responsibility with the CARB for ensuring that all State and Federal ambient air quality standards are attained within the District. The Project area is located in

4.3.2.4 Current Facility Air Quality Permits

4.3.3 Impact Analysis

a) Conflict with or obstruct implementation of the applicable air quality plan?

Impact Level.

b) 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?

Impact Level.

Work Task	Units	NO_x	ROG	PM_{10}	$PM_{2.5}$*	CO	SO_2
Construction	tons/year						
SJVAPCD Significance Threshold (tons/year)		**10**	**10**	**15**	**15**	**100**	**27**
Exceed Thresholds?							

*$PM_{2.5}$ emissions include fugitive dust emissions from grading activities and travel on unpaved roads.

Table 4.3-4. Estimated Construction Air Pollutant Emissions

Work Task	Units	NO_x	ROG*	PM_{10}	$PM_{2.5}$**	CO	SO_2
Operations	Tons/year						
SJVAPCD Significance Threshold (tons/year)		**10**	**10**	**10**	**15**	**100**	**27**
Exceed Thresholds?							

*ROG emissions include TOC emissions from fugitive TOC emissions from valves, connectors, flanges, and other Oil Field components.
**$PM_{2.5}$ emissions include fugitive dust emissions from travel on unpaved roads.

Table 4.3-5. Estimated Operational Air Pollutant Emissions

c) Expose sensitive receptors to substantial pollutant concentrations?

Impact Level.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact Level.

4.3.4 Mitigation Measures

Implementation of the following mitigation measure would reduce the potential for air quality impacts to less than significant:

4.4 BIOLOGICAL RESOURCES

BIOLOGICAL RESOURCES – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☐
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?	☐	☐	☐	☐
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?	☐	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☐

BIOLOGICAL RESOURCES – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**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?	☐	☐	☐	☐

4.4.1 Environmental Setting

Discuss the following:

1. Habitat
2. Waterways
3. Ephemeral drainages or other bodies of water in the area
4. Riparian or other wetland habitat
5. Bio survey historys
6. CNDDB and/or CDFW Listing of species the area

Threatened, endangered, and/or sensitive plant species with the potential to occur within or near the Project area.

Threatened, endangered, and/or sensitive wildlife species with the potential to occur within or near the Project area.

Invertebrates

Amphibians

Reptiles

Birds

Mammals

4.4.2 Regulatory Setting

Federal, State, and local regulations, laws and policies pertaining to biological resources relevant to the Project are included below.

4.4.2.1 Federal

Federal Endangered Species Act (FESA) (7 U.S.C. § 136, 16 U.S.C. § 1531 et seq.). The FESA, which is administered in California by the USFWS and National Marine Fisheries Service (NMFS), provides protection to species listed as threatened or endangered, or proposed for listing as threatened or endangered. When applicants propose projects with a federal nexus that "may affect" a federally listed or proposed species, the federal agency must (1) consult with the USFWS or NMFS, as appropriate, under Section 7, and (2) ensure that any actions authorized, funded, or carried out by the agency are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of areas determined to be critical habitat. The BLM Oil and Gas Programmatic Biological Opinion (2017) addresses FESA.

Section 9 prohibits the "take" of any member of a listed species.

Take – To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct

Harass – An intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering

Harm – Significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering

Migratory Bird Treaty Act (MBTA) (16 USC Section 703 et seq.). The MBTA makes it unlawful to take or possess any migratory nongame bird (or any part of such migratory nongame bird) as designated under the MBTA.

Federal Noxious Weed Act of 1974 (P.L. 93-629) (7 USC 2801 et seq.; 88 Stat. 2148). The Federal Noxious Weed Act establishes a federal program to control the

spread of noxious weeds. Authority is given to the Secretary of Agriculture to designate plants as noxious weeds by regulation, and the movement of all such weeds in interstate or foreign commerce was prohibited except under permit.

Bald and Golden Eagle Protection Act (16 USC Section 668 et seq.). The Bald and Golden Eagle Protection Act declares it is illegal to take, possess, sell, purchase, barter, offer to sell or purchase or barter, transport, export or import a bald or golden eagle, alive or dead, or any part, nest or egg of these eagles unless authorized. Active nest sites are also protected from disturbance during the breeding season.

Clean Water Act (CWA) (33 USC Section 1251 et seq.). The CWA requires the permitting and monitoring of all discharges to surface water bodies. Section 404 requires a permit from the U.S. Army Corps of Engineers (USACE) for a discharge from dredged or fill materials into Waters of the U.S., including wetlands. Section 401 requires a permit from a regional water quality control board (RWQCB) for the discharge of pollutants. By Federal law, every applicant for a federal permit or license for an activity that may result in a discharge into a California water body, including wetlands, must request State certification that the proposed activity would not violate State and federal water quality standards.

Rivers and Harbors Act of 1899. The Rivers and Harbors Act requires a permit or letter of permission from USACE prior to any work being completed within navigable waters.

4.4.2.2 State

California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.). The CESA provides for the protection of rare, threatened, and endangered plants and animals, as recognized by the CDFW, and prohibits the taking of such species without its authorization. Furthermore, the CESA provides protection for those species that are designated as candidates for threatened or endangered listings. Under the CESA, the CDFW has the responsibility for maintaining a list of threatened species and endangered species (Fish & G. Code, § 2070). The CDFW also maintains a list of candidate species, which are species that the CDFW has formally noticed as under review for addition to the threatened or endangered species lists. The CDFW also maintains lists of Species of Special Concern that serve as watch lists. Pursuant to CESA requirements, an agency reviewing a proposed Project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the Project area and determine whether the proposed Project would have a significant impact on such species. The CDFW

encourages informal consultation on any proposed Project that may affect a candidate species. The CESA also requires a permit to take a state-listed species through incidental or otherwise lawful activities (§ 2081, subd. (b)).

Porter-Cologne Water Quality Control Act (Water Code Sections 13000 et seq.). The Porter-Cologne Water Quality Control Act requires that each of the nine Regional Water Quality Control Boards prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards.

Protection of Birds and Nests (Fish and Game Code sections 3503 and 3503.5). These policies protect California's birds by making it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Raptors (e.g., hawks and owls) are specifically protected.

Migratory Birds (Fish and Game Code section 3513). This policy protects California's migratory birds by making it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame birds.

Fur-bearing Mammals (Fish and Game Code sections 4000 and 4002). This policy lists fur-bearing mammals which require a permit for take.

Fully Protected Species (Fish and Game Code sections 3511, 4700, 5050, and 5515). These policies identify several amphibian, reptile, fish, bird, and mammal species that are Fully Protected. CDFW cannot issue a take permit for these species, except for take related to scientific research.

CEQA Guidelines Section 15380. CEQA defines rare species more broadly than the definitions for species listed under the State and federal Endangered Species Acts. Under Section 15830, species not protected through State or federal listing but nonetheless demonstrable as "endangered" or "rare" under CEQA should also receive consideration in environmental analyses. Included in this category are many plants considered rare by the California Native Plant Society and some animals on the CDFW's Special Animals List.

Lake and Streambed Alteration Agreement (Fish and Game Code section 1600 et seq.). This policy regulates activities that may divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake in California designated by CDFW in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit. Impacts to

vegetation and wildlife resulting from disturbances to waterways are also reviewed and regulated during the permitting process.

California Desert Native Plants Act of 1981 (Food and Agricultural Code Section 80001 et seq. and California Fish and Game Code sections 1925-1926). The California Desert Native Plants Act protects non-listed California desert native plants from unlawful harvesting on both public and private lands in Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego counties. Unless issued a valid permit, wood receipt, tag, and seal by the commissioner or sheriff, harvesting, transporting, selling, or possessing specific desert plants is prohibited.

Food and Agriculture Code Section 403. California Department of Food and Agriculture is designated to prevent the introduction and spread of injurious insect or animal pests, plant diseases, and noxious weeds.

Noxious Weeds (Title 3, CCR Section 4500). List of plant species that are considered noxious weeds.

4.4.2.3 Local

Example

Kern County General Plan (2009)

Chapter 1.10. General Provisions

Policy 1: Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.
Policy 2: County should work closely with State and federal agencies to assure that discretionary projects avoid or minimize impacts to fish, wildlife, and botanical resources.
Policy 3: The County will seek cooperative efforts with local, State, and federal agencies to protect listed threatened and endangered plant and wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.
Policy 5: Under the provisions of the California Environmental Quality Act (CEQA), the County, as lead agency, will solicit comments from the California Department of Fish and Game and the U.S. Fish and Wildlife Service when an environmental document (Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report) is prepared.
Policy 6: Riparian areas will be managed in accordance with United States Army Corps of Engineers, and the California Department of Fish and Game rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.

Chapter 5: Energy

5.2. Importance of Energy to Kern County

Policy 8: The County should work closely with local, State, and federal agencies to assure that energy projects (both discretionary and ministerial) avoid or minimize direct impacts to fish, wildlife, and botanical resources, wherever practical.

5.4. Electricity Resources and Generation

5.4.7. Transmission Lines

Policy 6: The County should encourage new transmission lines to be sited/configured to avoid or minimize collision and electrocution hazards to raptors.

Kern County Revised Zoning Ordinance for Oil and Gas Activities (2021). *Revised Amendments Chapter 19.98 Oil and Gas Activities.* Currently, the permitting process for the Kern County Oil and Gas Ordinance is suspended pending litigation. However, Kern County Ordinance is still in place and all measures to protect biological resources will be implemented as presented in the Supplemental Oil and Gas EIR Mitigation Monitoring and Reporting Program for the Kern County Oil and Gas Zoning Ordinance SREIR (2020/2021).

Kern County Valley Floor Habitat Conservation Plan. A program involving various government, environmental, and industry representatives who are developing a strategy to protect State and federally-listed threatened and endangered species in the San Joaquin Valley portion of Kern County through the issuance of State and federal incidental take permits.

4.4.3 Impact Analysis

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

Impact Level.

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?

Impact Level.

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?

Impact Level.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Impact Level.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact Level.

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?

Impact Level.

4.4.4 Mitigation Measures

Implementation of the following mitigation measures would reduce the potential for biological resource impacts to less than significant:

4.5 CULTURAL RESOURCES

CULTURAL RESOURCES – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	☐	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☐

4.5.1 Environmental Setting

Discuss the following:

1. Cultural Resources Assessments
2. Archaeological records search and results
3. Sacred Lands File record search housed by the Native American Heritage Commission (NAHC)
4. Pedestrian Surveys and results

4.5.2 Regulatory Setting

Federal, State, and local regulations, laws, and policies pertaining to cultural resources relevant to the Project are included below.

4.5.2.1 Federal

National Historic Preservation Act of 1966 (NHPA) (16 U.S.C. § 470 et seq.) and implementing regulations (Protection of Historic Properties; 36 CFR 800) (applies only to Federal undertakings). Archaeological resources are protected through the NHPA and its implementing regulation (Protection of Historic Properties; 36 Code of Federal Regulations 800), the AHPA, and the ARPA. This Act presents a general policy of supporting and encouraging the preservation of

prehistoric and historic resources for present and future generations by directing federal agencies to assume responsibility for considering the historic resources in their activities. The state implements the NHPA through its statewide comprehensive cultural resource surveys and preservation programs coordinated by the California Office of Historic Preservation (OHP) in the State Department of Parks and Recreation, which also advises federal agencies regarding potential effects on historic properties.

The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the state's jurisdictions, including commenting on federal undertakings. Under the NHPA, historic properties include "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places" (16 U.S.C. § 470w [5]).

4.5.2.2 State

California Environment Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). CEQA section 21084.1 provides that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. Historical resources may include archaeological resources. Mitigation measures for significant impacts to historical resources must be identified and implemented if feasible. CEQA statute and guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts to historical resources, which include all resources listed in or formally determined eligible for the CRHR or local registers. CEQA further defines a "historical resource" as a resource that meets any of the following criteria:

A resource listed in, or determined to be eligible for listing in, the CRHR;

A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code, unless the preponderance of evidence demonstrates that it is not historically or culturally significant;

A resource identified as significant (i.e., rated 1-5) in a historical resource survey meeting the requirements of Public Resource Code Section 5024.1(g) (DPR Form 523), unless the preponderance of evidence demonstrates that it is not historically or culturally significant; or

Any object, building, structure, site, area, place, record or manuscript which a lead agency determines to be historically significant or significant in the

architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered "historically significant" if it meets the criteria for listing on the CRHR (CEQA Guidelines Section 15064.5).

California Register of Historical Resources (CRHR). The CRHR is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (Pub. Resources Code, § 5024.1, subd. (a)). CRHR eligibility criteria are modeled after National Register of Historic Places criteria but focus on resources of statewide significance. Certain resources are determined by the statute to be automatically included in the CRHR, including California properties formally determined to be eligible for, or listed in, the NRHP. To be eligible for the CRHR, a prehistoric or historical period property must be significant at the local, state, or federal level under one or more of the following criteria (State CEQA Guidelines, § 15064.5, subd. (a)(3)):

Criterion 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

Criterion 2: Is associated with the lives of persons important in California's past;

Criterion 3: 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; and/or

Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the CRHR must meet one of the criteria of significance above and retain enough of its historic character or appearance (integrity) to be recognizable as an historical resource and to convey the reason for its significance. An historic resource that may not retain sufficient integrity to meet the criteria for listing in the National Register of Historic Places, may still be eligible for listing in the CRHR. Properties listed, or formally designated as eligible for listing, on the National Register are automatically listed on the CRHR, as are certain State Landmarks and Points of Interest. A lead agency is not precluded from determining that the resource may be an historical resource as defined in

Public Resources Code sections 5020.1, subdivision (j), or 5024.1 (State CEQA Guidelines, § 15064.5, subd. (a)(4)).

4.5.2.3 Local

Example

Kern County General Plan (2009)

Chapter 1.10. General Provisions

Policy 1: The County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to residents and visitors.

4.5.3 Impact Analysis

a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

Impact Level.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Impact Level.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Impact Level.

4.5.4 Mitigation Measures

Implementation of the following mitigation measures would reduce the potential for cultural resource impacts to less than significant:

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4.6 ENERGY

ENERGY – Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☐

4.6.1 Environmental Setting

Discuss the following:

1. Discuss historical energy use by the facility: diesel, electrical use.
2. Discuss regional energy use levels

4.6.2 Regulatory Setting

There are no Federal laws, regulations, or policies pertaining to energy that are relevant to the Project. State and local regulations, laws, and policies pertaining to energy relevant to the Project are included below.

4.6.2.1 State

California Integrated Energy Policy. Senate Bill (SB) 1389 requires the CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety." (Public Resources Code [PRC] Section 25301(a)). The CEC adopts an Integrated Energy Policy Report every two years and an update every other year. At the time of the Notice of Preparation (NOP) publication, the CEC had published its 2021

report in April 2022. A scoping order for the 2023 Integrated Energy Policy Report has been posted as of September 2023.

Clean Energy and Pollution Reduction Act (SB 350; Stats. 2015, ch. 547). This Act requires that the amount of electricity generated and sold to retail customers from renewable energy resources be increased to 50 percent by December 31, 2030, and that statewide energy efficiency savings in electricity and natural gas by retail customers be doubled by January 1, 2030.

4.6.2.2 Local

Example

Kern County General Plan (2009)

Chapter 1: Land Use, Conservation, and Open Space

1.9. Resource

Policy 19: Work with other agencies to define regulatory responsibility concerning energy-related issues.

Chapter 5: Energy

5.2. Importance of Energy to Kern County

Policy 7: The processing of all discretionary energy project proposals shall comply with California Environmental Quality Act (CEQA) Guidelines directing that the environmental effects of a project must be taken into account as part of project consideration.

5.4. Electric Resources and Generation

5.4.7. Transmission Lines

Policy 3: In reviewing proposals for new transmission lines and/or capacity, the County should assert a preference for upgrade of existing lines and use of existing corridors where feasible.

4.6.3 Impact Analysis

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Level.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact Level.

4.6.4 Mitigation Measures

The Project would not result in significant impacts on energy; therefore, no mitigation is required.

4.7 GEOLOGY AND SOILS

GEOLOGY AND SOILS – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☐
ii) Strong seismic ground shaking?	☐	☐	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☐
iv) Landslides?	☐	☐	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☐
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?	☐	☐	☐	☐
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?	☐	☐	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste	☐	☐	☐	☐

GEOLOGY AND SOILS – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
water disposal systems where sewers are not available for the disposal of waste water?				
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☐

4.7.1 Environmental Setting

Discuss the following:

1. Exacerbate seismic issues, Alquist-Piolo Earthquake zone mapping
2. Landslides
3. Faulting and ground shaking
4. Liquefaction
5. Seismic induced settlement
6. Slope stability
7. Soil erosion or loss of topsoil
8. Subsidence, liquefaction
9. Expansive soils as per UBC
10. Septic systems
11. Paleontological resources

4.7.2 Regulatory Setting

Federal, State, and local regulations, laws, and policies pertaining to geology and soils relevant to the Project are included below.

4.7.2.1 Federal

Uniform Building Code. The Uniform Building Code (UBC) was first published in 1927 by the International Council of Building Officials, a non-governmental

organization. It was intended to promote public safety and provided standardized requirements for safe construction. Updated editions of the code were published every three years until 1997, which was the final version of the code. Since that time, the UBC, published by the ICC since 1997, has been adopted by many jurisdictions, including the State of California, in their building codes. Some jurisdictions continue to refer to the UBC, including Kern County. The UBC categorizes earthquake hazards in different regions of the United States by seismic Zones 1 through 4, with Zone 1 having the least seismic potential and Zone 4 having the highest seismic potential. The Project Area lies within Seismic Zone 4.

Clean Water Act (CWA). The CWA (33 United States Code [U.S.C.] Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. Several provisions of the CWA regulate activities that could affect soil erosion and chemical composition of water. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the NPDES permit process (CWA Section 402). Projects that disturb one or more acre of land are required to obtain NPDES coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit). Construction General Permits are implemented and enforced by the California Water Resources Control Board under Order No. 2009-0009-DWQ. The General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which includes BMPs to protect storm water runoff.

Requirements of the Federal CWA and associated SWPPP requirements are described in further detail in Section 4.10, Hydrology and Water Quality.

Earthquake Hazards Reduction Act. The National Earthquake Hazards Reduction Program (NEHRP) was established by the U.S. Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law (P.L.) 95– 124. At the time of its creation, Congress' stated purpose for NEHRP was "to reduce the risks of life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program." Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early-warning systems, coordinated emergency preparedness plans, and public education and

involvement programs. Since NEHRP's creation, it has become the Federal government's coordinated long term nationwide program to reduce risks to life and property in the United States that result from earthquakes. Four basic NEHRP goals are as follows:

Develop effective practices and policies for earthquake loss reduction and accelerate their implementation;

Improve techniques for reducing earthquake vulnerabilities of facilities and systems;

Improve earthquake hazards identification and risk assessment methods, and their use; and

Improve the understanding of earthquakes and their effects.

Congress has recognized that several key Federal agencies can contribute to earthquake mitigation efforts. Today, there are four primary NEHRP agencies:

Federal Emergency Management Agency (FEMA) of the Department of Homeland Security;

National Institute of Standards and Technology (NIST) of the Department of Commerce (NIST is the lead NEHRP agency);

National Science Foundation; and

USGS of the Department of the Interior.

Congress completed a review of NEHRP, resulting in the NEHRP Reauthorization Act of 2004, PL 108–360. PL 108–360 directed that NEHRP activities be designed to develop effective measures for earthquake hazard reduction; promote the adoption of earthquake hazards reduction measures by government agencies, standards and codes organizations, and others involved in planning and building infrastructure; improve the understanding of earthquakes and their effects through interdisciplinary research; and, develop, operate, and maintain both the Advanced National Seismic System (ANSS) and the George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES). In a major new initiative, PL 108–360 also directed that NEHRP support development and application of performance-based seismic design (PBSD).

Oil and Gas Pipelines. The Pipeline and Hazardous Material Safety Administration (PHMSA), under the U.S. Department of Transportation (DOT) is responsible for regulating and ensuring the safe and secure movement of hazardous materials to industry and consumers by all modes of transportation, including pipelines. The PHMSA's Office of Pipeline Safety (OPS) administers the

DOT's national regulatory program to assure the safe transportation of natural gas, petroleum, and other hazardous materials by pipeline. The OPS develops regulations and other approaches to risk management to ensure safety in design, construction, testing, operation, maintenance, and spill response planning of pipeline facilities. Pipeline safety regulations are listed in the Code of Federal Regulations (CFR), Title 49 Parts 190 to 199.

4.7.2.2 State

Seismic Hazards Mapping Act of 1990. In accordance with Public Resources Code, Chapter 7.8, Division 2, the California Department of Conservation, Division of Mines and Geology (now California Geological Survey) is directed to delineate Seismic Hazard Zones through the Seismic Hazards Zonation Program. The purpose of the Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards, such as those associated with strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. Cities, counties, and State agencies are directed to use seismic hazard zone maps developed by CGS in their land-use planning and permitting processes.

California Building Code (CBC 2013). The State of California provides minimum standards for building design and construction relating to fire and life safety, structural safety, and access compliance through the California Building Code (CBC), California Code of Regulations, Title 24. CBC provisions provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures and certain equipment. The code incorporates by adoption the 2012 International Building Code of the International Code Council. The 2013 edition of the California Building Standards Code (Title 24) became effective on January 1, 2014.

Among other provisions, the CBC requires that a grading permit be issued by applicable local land use authorities if more than 50 cubic yards of soil are moved during the implementation of a project, and Chapter 16 (Structural Design) of the code describes seismic load calculation and design.

Underground Injection Control Program. In California, wells that inject fluids associated with oil and natural gas production operations (Class II injection wells) also are regulated by CalGEM under its UIC Program. Injection operations regulated under the UIC Program include enhanced oil recovery through waterflood, steamflood, and cyclic steam wells, produced water disposal, and gas storage. CALGEM is authorized to regulate Class II injection wells under EPA

oversight, pursuant to the 1982 primacy agreement between the EPA and CALGEM under the Federal Safe Drinking Water Act (SDWA). The requirements of CALGEM's UIC Program are found in the PRC, the SDWA, and in the State and Federal regulations. The main features of the UIC Program include permitting, inspection, enforcement, mechanical integrity testing, plugging and abandonment oversight, data management, and public outreach. It is CALGEM's intent that the UIC Program will be administered consistently in each of CALGEM's six districts.

Existing UIC Program PAL History and Compliance (if Applicable)

CalGEM Field Rules. Pursuant to CCR Title 14, Division 2, Chapter 4, Section 1722 (k), the State Oil and Gas Supervisor may establish field rules for any oil and gas pool or zone in a field when sufficient geologic and engineering data are available from previous drilling operations. CALGEM has established field rules for those fields where geologic and engineering information is available to accurately describe subsurface conditions. These field rules identify downhole conditions and well-construction information that oil and gas operators should consider when drilling and completing onshore oil and gas wells.

4.7.2.3 Local

Kern County General Plan (2009)

Chapter 1: Land Use, Conservation, and Open Space

1.3. Physical and Environmental Constraints

Policy 1: Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained (Map Code 2.1 [Seismic Hazard], Map Code 2.2 [Landslide], Map Code 2.3 [Shallow Groundwater], Map Code 2.5 [Flood Hazard], Map Codes from 2.6 – 2.9, Map Code 2.10 [Nearby Waste Facility], and Map Code 2.11 [Burn Dump Hazard]) to support such development unless appropriate studies establish that such development will not result in unmitigated significant impact.

Policy 6: Regardless of percentage of slope, development on hillsides will be sited in the least obtrusive fashion, thereby, minimizing the extent of topographic alteration required and reducing soil erosion while maintaining soil stability.

Chapter 4: Safety Element

4.5. Landslide, Subsidence, Seiche, and Liquefaction

Policy 3: Reduce the potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.

4.8. Critical Facilities and Hazardous Buildings

Policy 6: The County shall ensure the inventory, periodic inspection, and adoption of high seismic standards for potentially hazardous buildings.

4.7.3 Impact Analysis

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.

ii. Strong seismic ground shaking?

iii. Seismic-related ground failure, including liquefaction?

iv. Landslides?

Impact.

b) Result in substantial soil erosion or the loss of topsoil?

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?

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 risk to life or property?

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?

Impact.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact:

4.7.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

4.8 GREENHOUSE GAS EMISSIONS

GREENHOUSE GAS EMISSIONS - Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☐

4.8.1 Environmental Setting

Discuss the following:

1. Describe programs: C&T, Scoping Plan. Local CAPs
2. Quantify construction and operational emissions levels
3. Provide detailed spreadsheet calcs or CalEEMod calcs
4. Discuss compliance with plans: local Climate Plans, C&T
5. Compare to local thresholds

Greenhouse Gases (GHGs), defined as any gas that absorbs infrared radiation in the atmosphere, include, but are not limited to, water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorocarbons. These GHGs trap and build up heat in the atmosphere near the earth's surface, commonly known as the Greenhouse Effect. Unlike criteria pollutants and TACs, which are pollutants of regional and local concern, GHGs and climate change are a local, regional, and global issue. There is the possibility that human-caused increases in GHGs have and will continue to contribute to climate change, although there is uncertainty concerning the magnitude and rate of the warming.

Climate change is having and will continue to have widespread impacts on California's environment, water supply, energy consumption, public health,

and economy. Many impacts have already occurred, including increased fires, floods, severe storms, and heat waves (CGOPR, 2018). Documented effects of climate change in California include increased average, maximum, and minimum temperatures; decreased spring runoff to the Sacramento River; shrinking glaciers in the Sierra Nevada; sea-level rise at the Golden Gate Bridge and San Francisco Bay; warmer temperatures in Lake Tahoe, Mono Lake, and other major lakes; and plant and animal species found at changed elevations (CGOPR, 2018).

According to the Intergovernmental Panel on Climate Change (IPCC), the concentration of CO_2, the primary GHG, has increased from approximately 280 parts per million (ppm) in pre-industrial times (Fifth Assessment Report) to well over 410 ppm in 2021 (Sixth Assessment Report) (IPCC, 2014 and IPCC, 2021). CO_2 concentrations as of 2019 are increasing about 1.9 ppm/year; present CO_2 concentrations are higher than any time in at least the last 2 million years. CO_2 is used as a reference gas for climate change. To account for different GHG global warming potentials for other gases, emissions are often quantified and reported as CO_2 equivalents (CO_2e). For example, if the CO_2 global warming potential is set at a reference value of 1, CH_4 has a warming potential of 27.9 (i.e., 1 ton of methane has the same warming potential as 27.9 tons of CO2 [IPCC, 2021]), while nitrous oxide has a warming potential of 273.

To meet both the statewide 2020 GHG reduction target that requires California to reduce its total statewide GHG emissions to 1990 levels by 2020, (Health & Safety. Code, § 38550), the 2030 goal of 40 percent below 1990 levels (Executive Order S-30-15) and the 2050 goal of 80 percent below 1990 levels (Executive Order S-3-05), not only must projects contribute to slowing the increase in GHG emissions, but projects should contribute to reducing the State's GHG output. In order to reach California's GHG reduction targets, per capita emissions would need to be reduced by slightly less than five percent each year from 2020 to 2030, with continued reductions through 2050.

4.8.2 Regulatory Setting

Federal, State, and local regulations, laws, and policies pertaining to greenhouse gas emissions relevant to the Project are included below.

4.8.2.1 Federal and State

Assembly Bill 32, California Global Warming Solutions Act. Assembly Bill (AB) 32 a statewide GHG emissions reduction to 1990 levels by 2020. AB-32 established regulatory, reporting, and market mechanisms to achieve quantifiable reductions

in GHG emissions and established a statewide GHG emissions cap. AB 32 authorized CARB to adopt market-based compliance mechanisms, such as the Cap-and-Trade system.

In 2008 and 2014, CARB approved the Scoping Plan and the first update to the Scoping Plan, respectively. In 2016, the California Legislature passed SB 32, which established a 2030 GHG emissions reduction target of 40 percent below 1990 levels. In response to SB 32 and the companion legislation of AB 197, CARB approved the 2017 Scoping Plan Update: The Strategy for Achieving California's 2030 GHG Target in November 2017. The 2017 Scoping Plan drew from the previous plans to present strategies to reaching California's 2030 GHG reduction target.

Assembly Bill 1279, The California Climate Crisis Act. AB 1279 was approved by the governor and added to Section 38562.2 to the California Health and Safety Code in late 2022. AB 1279 set state policy to achieve the following:

- Net zero greenhouse gas emissions as soon as possible, but no later than 2045 and maintain net negative greenhouse gas emissions thereafter; and
- statewide anthropogenic greenhouse gas emissions are reduced to at least 85 percent below 1990 levels by 2045.

In December 2022 CARB approved the 2022 Scoping Plan 2022 to layout a path to achieve targets directed by Assembly Bill 1279.

Cap and Trade Program. CARB approved the Cap-and-Trade Program (Cap-and-Trade) in late 2011. Cap-and-Trade sets a limit (cap) on the total emissions of GHG in the state, this cap declines by approximately 5% per year through 2030. California oil and gas production operations that emit more than 25,000 metric tons of carbon dioxide equivalent ($MTCO_2E$) per year are required to be covered under Cap-and-Trade (covered entities). Covered entities are required to obtain GHG allowances1 to cover their GHG emissions. GHG allowances are issued by CARB or can be purchased from CARB or other entities covered under subject to Cap-and-Trade. A GHG allowance is a tradable permit to emit 1 $MTCO_2E$ of GHGs within the compliance year. These allowances are reduced each year which required the covered entity to reduce GHG emissions generated by their facility. In addition, covered entities can obtain GHG offset credits by implementing emissions reduction activities at other facilities.

1 Title 17, California Code of Regulations, § 95812

Project Cap-and-Trade Compliance Obligation Emissions. Project GHG emissions that would have a direct compliance obligation for the Project under the Cap-and-Trade program include emissions from the following:

- Well venting during well completions, workovers, well testing and well venting during liquids unloading; and
- Equipment leaks from valves, connectors, open-ended pipelines, pressure relief valves, pump, flanges, and other associated equipment leak sources.

Project GHG emissions from fuel combustion in construction equipment and other mobile sources used in connection with Project construction and operation, as well as indirect emissions from electricity generation do not contribute to the Project's Cap-and-Trade Program GHG compliance obligation. However, these emissions are covered under Cap-and-Trade in connection with the activities of other source categories, such as electricity generation and fuel suppliers.

Mandatory GHG Reporting Regulations. AB 32 sets the requirement for oil and gas sources to report their GHG emissions if their combustion or process emissions exceed 10,000 $MTCO_2E$ per year or if stationary combustion, process, fugitive, and vented emissions are 25,000 $MTCO_2E$ per year or greater.

Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities. The Greenhouse Gas Emissions Standards for Crude Oil and Natural Gas Facilities (California Oil/Gas GHG Regulation) adopted by CARB in March 2017 and amended in June 2023, addresses fugitive and vented emissions from new and existing oil and gas facilities. This regulation covers GHG emissions, primarily CH_4, from production, gathering and boosting stations, and processing as well as natural gas storage and transmission compressor stations. The regulation defines vented emissions as intentional and fugitive as unintentional releases of GHGs by processes at oil and gas facilities in the following sectors:

Onshore and offshore crude oil or natural gas production;

Crude oil, condensate and produced water separation and storage;

Natural gas underground storage;

Natural gas gathering and boosting stations;

Natural gas processing plants; and

Natural gas transmission compressor stations.

The API gravity of the crude oil proposed to be produced by the Project is less than 20 API. Projects producing crude oil with an API gravity of less than 20 is exempt from the requirement of the California Oil/Gas GHG Regulation.

4.8.2.2 Local

San Joaquin Valley Air Pollution Control District. The Project area is located within Kern County which is located within SJVAB. At the local level, the SJAPCD regulates GHG emissions within the SJVAB.

SJVAPCD adopted the Climate Change Action Plan (CCAP) in August 2008 to assist lead agencies in assessing and reducing the impacts of project level GHG emissions. The SJVAPCD developed following two guidance documents that outline the SJVAPD's process for determining the significance of a project's GHG impacts:

Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (SJVAPCD, 2009); and
District Policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency (SJVAPCD, 2009).

The guidance documents indicate that the effects of a project's GHG emissions are cumulative, and unless appropriately reduced or mitigated their incremental contribution to climate change could be considered significant. Under these guidance documents all new projects that would increase GHG emissions are required to implement Performance Based Standards (PBS), or otherwise demonstrate that project GHG emissions can be reduced or mitigated by at least 29 percent of business-as-usual. The documents provide the following guidance for the evaluation of project GHG significance:

Projects determined to be exempt from CEQA requirements would be determined to have a less than significant individual and cumulative GHG emissions impact and would not require further environmental review Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement PBS.

Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative GHG emissions impact.

Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement PBS.

Projects implementing PBS would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant dividual and cumulative impact for GHG emissions.

Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project GHG emissions would be reduced or mitigated by at least 29%, compared to business-as-usual. Projects achieving at least a 29% GHG emission reduction compared to business-as-usual would be determined to have a less than significant individual and cumulative impact for GHG.

Performance Based Standards. The PBS standards that may be applicable to the Project are listed below:

Oil & Gas Extraction, Storage, Transportation and Refining Operations

Production/Processing/Refineries: Minimize fugitive GHG emissions by applying leak standards and inspection and maintenance (I&M) requirements to components subject to Rules 4409 requirements; and

Thermally Enhanced Oil Recovery (TEOR) Wells: Minimize fugitive GHG emissions by applying leak standards and I&M requirements to components subject to Rule 4401 requirements.

The SJVAPCD has not established a quantitative GHG emission threshold and Kern County currently does not have a Climate Action Plan. Therefore, SJVAPCD rules, regulations and plans must show consistency with AB 32, CARB's Scoping Plan and CARB's 2017 Scoping Plan Update. A Project that is consistent with SJVAPCD rules, regulations and plans would not emit GHGs that would have a significant impact on the environment or conflict with a plan to reduce GHG emissions.

San Joaquin Valley Air Pollution Control District Rules: The following SJVAPCD rules and regulations may be applicable to the Project:

Regulation II Rule 2010 – Permits Required. – The purpose of this rule is to require any person constructing, altering, replacing or operating any source

operation which emits, may emit, or may reduce emissions to obtain an ATC or a PTO;

Regulation II Rule 2260 – Registration Requirement for Equipment Subject to California Oil/Gas GHG Regulation. The purpose of this rule is to provide a registration mechanism that satisfies the requirements of and will ensure compliance with California's Oil and Gas Regulation. Per the California Oil/Gas GHG Regulation the Project is exempt from this Rule; and

Regulation IV Rule 4401 – Steam-Enhanced Crude Oil Production Wells. This rule sets the requirement to recover all gases from all new oil and gas wells. Gases released during planned or unplanned operations from new wells used for delineation and monitoring purposes are exempt.

4.8.3 Impact Analysis

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact:

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact.

4.8.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

4.9 HAZARDS AND HAZARDOUS MATERIALS

HAZARDS AND HAZARDOUS MATERIALS – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☐
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?	☐	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☐
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 or excessive noise for people residing or working in the project area?	☐	☐	☐	☐

HAZARDS AND HAZARDOUS MATERIALS – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☐

4.9.1 Environmental Setting

Discuss the following:

1. Describe spill plans
2. Are pads protected by berms
3. Spill impacts to nearby creeks, identify creeks
4. Chemicals used for drilling and operations
5. Distance to closest school
6. Reliance on local FD. Coordination efforts and history of response activities
7. EnviroStor database search
8. Distance to closest school less than ¼ mile
9. Located within an airport plan area
10. HMBP status and contents
11. Wildfire issues

4.9.2 Regulatory Setting

Federal, State, and local regulations, laws, and policies pertaining to hazards and hazardous materials relevant to the Project are included below.

4.9.2.1 Federal

National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR §300). The National Oil and Hazardous Substances Pollution Contingency Plan (NCP), was first developed in 1968. The NCP is administered by the EPA. Its purpose is to provide the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants.

It applies to oil discharges into or on navigable waters of the United States as well as hazardous substance releases into the environment that may present an imminent or substantial danger to public health or welfare of the United States. It specifies responsibilities among the Federal, State, and local governments and requires the establishment of Federal, regional, and area contingency plans. It summarizes State and local emergency planning requirements under the Superfund Amendments and Reauthorization Act (SARA). It also provides the procedures for undertaking removal actions pursuant to Section 311 of the CWA and response actions pursuant to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which is discussed below.

Resource Conservation and Recovery Act (40 CFR §240-299). The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act (RCRA) of 1976 established a program administered by the EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the HSWA, which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. Hazardous waste is regulated under the RCRA subtitle C. The RCRA established the system for controlling hazardous waste from its point of origin to its final disposal, specifically the handling, storage, and disposal requirements. A RCRA hazardous waste is a waste that appears on one of the four hazardous wastes lists (F-list, K-list, P-list, or U-list), or exhibits at least one of four characteristics—ignitability, corrosivity, reactivity, or toxicity. The Hazardous Waste Manifest System includes a set of forms, reports, and procedures designed to seamlessly track hazardous waste from the time it leaves the generator facility where it was produced, until it reaches the offsite waste management facility that will store, treat, or dispose of the hazardous waste. Operating records, for example, must be kept on site for the duration of the facility's operation. Recordkeeping and reporting requirements are found at 40 CFR Part 264 subpart E and 40 CFR Part 265 Subpart E.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act (CERCLA). CERCLA, commonly known as Superfund, was enacted by Congress on December 11, 1980. This law (U.S.C. Title 42, Chapter 103) provides broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites; provides for liability of persons responsible for releases of hazardous waste at these sites and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables the revision of the NCP. The NCP (40 Code of Federal Regulations [CFR], Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the NPL. CERCLA was amended by the SARA on October 17, 1986.

Emergency Planning and Community Right-to-Know Act. Under the Emergency Planning and Community Right-to-Know Act, or Title III of the SARA, the EPA requires local agencies to regulate the storage and handling of hazardous materials and requires development of a plan to mitigate the release of hazardous materials. Businesses that handle any of the specified hazardous materials must submit to government agencies (i.e., fire departments or public health departments), an inventory of the hazardous materials, an emergency response plan, and an employee training program. The business plans must provide a description of the types of hazardous materials/waste on-site and the location of these materials. The information in the business plan can then be used in the event of an emergency to determine the appropriate response action, the need for public notification, and the need for evacuation.

In 1990, Congress passed the Pollution Prevention Act which requires facilities to report additional data on waste management and source reduction activities to the EPA under the Toxics Release Inventory Program. The goal of the Toxics Release Inventory is to provide communities with information about toxic chemical releases and waste management activities and to support informed decision making at all levels by industry, government, non-governmental organizations, and the public.

The Safe Drinking Water Act (SDWA) of 1974 (42 U.S.C. §300f et seq.). The SDWA regulates the amount of toxic substances in drinking water sources. The SDWA requires the EPA to develop minimum Federal requirements for UIC programs and other safeguards to protect public health by preventing injection

wells from contaminating underground sources of drinking water. The EPA developed the UIC Program requirements, but States, territories, and tribes can obtain primary enforcement responsibility, or primacy. State regulations must be as stringent as Federal requirements but may be more stringent. As discussed in detail in Section 4.10, Hydrology and Water Quality, the EPA has delegated responsibility to CalGEM for implementing UIC Program requirements for Class II wells in California.

The subsurface aquifer located within the Project area is located within an exempted portion of the Tulare formation aquifer, which is not a protected groundwater source recognized by the EPA under the SDWA because it does not serve as a source of drinking water. This aquifer exemption allows this underground water source to be used by energy companies for oil extraction purposes in compliance with EPA's UIC requirements under the SDWA.

Clean Air Act Amendments of 1990: Section 112(r) (40 CFR 68). The EPA requires facilities that handle listed regulated substances to develop Risk Management Plans (RMP) to prevent accidental releases of these substances. RMP materials are submitted to both local agencies (generally the fire department) and the EPA. Stationary sources with more than a threshold quantity of a regulated substance shall be evaluated to determine the potential for, and impacts of, accidental releases of that substance. Under certain conditions, the owner or operator of a stationary source may be required to develop and submit an RMP. RMPs consist of three main elements: a hazard assessment that includes an off-site consequence analysis and a five-year accident history; a prevention program; and an emergency response program.

Hazardous Liquid Pipeline Safety Act. The Hazardous Liquid Pipeline Safety Act of 1979 and amendments authorize the DOT to regulate pipeline transportation of hazardous liquids (including crude oil, petroleum products, anhydrous ammonia, and carbon dioxide). The Act provides advanced safety and environmental protection in pipeline transportation, increases the transparency of pipeline safety evaluation, and provides funding for future pipeline safety studies.

Exploration and Production Exemption from RCRA. While RCRA was enacted to regulate hazardous waste from industrial, commercial, mining, agricultural, and community activities, certain hazardous wastes which are exempted from the Subtitle C regulations are regulated under RCRA Subtitle D. Congress exempted "drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil or

natural gas or geothermal energy" from regulation under RCRA Subtitle C as hazardous wastes.

The exempted oil and gas wastes are unique because they are generated in large quantities but are relatively low in toxicity. Produced waters make up about 98% of all oil and gas waste. The exemption only applies to wastes generated from the exploration, development, and production of oil and gas associated with primary field operations. Primary field operations include primary, secondary, and tertiary production of oil or gas.

The Oil Pollution Act of 1990 (33 U.S.C. 2701 et seq.). Under the authority of §311 of the CWA, the Oil Pollution Act (OPA) of 1990 prescribes a prevention, response, liability, and compensation program for oil pollution from vessels, offshore facilities, pipelines, and onshore facilities. The OPA requires contingency plans be developed and includes reporting requirements to ensure the earliest possible notice of discharges of oil and hazardous substances and imminent threats of such discharges to the appropriate State and Federal agencies. The Bureau of Safety and Environmental Enforcement (formerly part of Mineral Management Service [MMS]), U.S. Coast Guard, and EPA are involved in the implementation of OPA. In June of 1996, the EPA issued a Spill Prevention and Reporting Compliance Guidance Plan Document which integrated all the various related rules and regulations into one compliance program (WZI, 2014).

Hazard Communication, 29 CFR 1910.1200. The purpose of this section is to ensure that the hazards of all chemicals produced or imported are classified and that information concerning the classified hazards is transmitted to employers and employees. The requirements of this section are intended to be consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Revision 3. The transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, safety data sheets and employee training.

4.9.2.2 State

Emergency Services Act of 2009. Under the Emergency Services Act, the State developed an emergency response plan to coordinate emergency services provided by Federal, State, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an important segment of the plan administered by the California Office of Emergency Services (CalOES), formerly the California Emergency Management Agency. CalOES is responsible for the coordination of overall State agency response to major

disasters in support of local government. The office is responsible for assuring the State's readiness to respond to and recover from all hazards – natural, manmade, war-caused emergencies and disasters – and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

Hazardous Waste Control Act of 1972 (HSC Division 20, Chapter 6.5). The Hazardous Waste Control Act established the State hazardous waste management program, which is similar to, but more stringent than RCRA program requirements. The Hazardous Waste Control Law regulates the management of hazardous waste under Health and Safety Code, Division 20 Chapter 6.5. This law defines hazardous wastes and the procedures for the handling, transportation, and disposal of hazardous waste. The implementing regulations prescribe management practices for hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. Hazardous waste is tracked from the point of generation to the point of disposal or treatment using hazardous waste manifests. The manifests list a description of the waste, its intended destination, and regulatory information about the waste. The hazardous waste control program is administered by the state DTSC and by local Certified Unified Program Agencies (CUPAs).

The Porter-Cologne Water Quality Control Act, California Water Code Sections 13300-13999 and Title 23 of the California Administrative Code. This Act is analogous to the Federal CWA and regulates discharges that may affect the quality of the State's waters. Unlike the Federal CWA, which defines "waters of the United States" to exclude groundwater, "waters of the State" as defined under the Porter-Cologne Act include groundwater. The SWRCB and the nine RWQCBs are responsible for planning, permitting, and enforcement. The State Board formulates policies for water-quality control and implements the required permit system.

The Porter-Cologne Act gives the Central Valley Regional Water Quality Control Board (CVRWQCB) the authority to regulate discharges of waste to land in Kern County. The CVRWQCB has established waste classifications, site classifications, and WDRs. The CVRWQCB implements the regulations through issuance of WDRs and general orders for the waste management unit. Waste management units, permitted by the CVRWQCB for the E & P industry, include evaporation ponds, percolation ponds, and sumps. As discussed in *Section 4.10, Hydrology and Water Quality*, drilling muds and boring wastes associated with oil

and gas development are currently regulated under SWRCB General Order 2003-0003-DWQ which addresses low-threat discharges to land.

AB 1960 Public Resources: Oil Production Facilities and Oil Spills. Under this bill, CalGEM is required to regulate the minimum facility maintenance standards for production facilities. The regulations that accompany this bill (14 CCR Sections 1722 – 1777.3) require operators to develop and implement spill contingency plans where condensate storage volume exceeds 50 barrels or at facilities that produce at least one barrel per day. The implementing regulations provide specific requirements for the spill contingency plan that include emergency contacts, available safety equipment, checklist for spill response, maps of the facility, a list of chemicals at the facility, containment features, corrosion prevention techniques, and the sensor and alarm systems.

California Pipeline Safety Act of 1981 (Cal. Gov. Code § 51010). This California Pipeline Safety Act gives regulatory jurisdiction to the State Fire Marshal for the safety of all intrastate hazardous liquid pipelines and oil interstate pipelines used for the transportation of hazardous or highly volatile liquid substances. The law establishes the Federal Hazardous Liquid Pipeline Safety Act (49 U.S.C. Sec. 2001 et seq.) and Federal pipeline safety regulations as the governing rules for intrastate pipelines. This statute also authorizes the State Fire Marshal by agreement with the United States Secretary of Transportation, to implement the Federal Hazardous Liquid Pipeline Safety Act and Federal pipeline safety regulations as to those portions of interstate pipelines located within the State. It also establishes civil penalties for violations of the act or its regulations.

4.9.2.3 Local

Kern County General Plan (2009)

Chapter 2: Circulation Element

2.5. Other Modes

2.5.2. Airport Land Use Compatibility Plan (ALUCP)

Policy 1: Review land use designations and zoning near public and private airports, Edwards Air Force Base and Naval Air Weapons (NAWS) China Lake for compatibility.

2.5.4. Transportation of Hazardous Materials

Policy 1: The commercial transportation of hazardous material, identification and designation of appropriate shipping routes will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan.

Policy 2: Kern County and affected cities should reduce use of County-maintained roads and city-maintained streets for transportation of hazardous materials.

Chapter 4: Safety Element

4.2. General Policies and Implementation Measure, Which Apply to More than One Safety Constraint

Policy 1: That the County's program of identification, mapping, and evaluating the geologic, fire, flood safety hazard areas, and significant concentrations of hydrogen sulfide in oilfield areas, presently under way by various County departments, be continued.

Policy 4: The County shall encourage extra precautions be taken for the design of significant lifeline installations, such as highways, utilities, and petrochemical pipelines.

Policy 5: The adopted Kern County, California Multi-Hazard Mitigation Plan is incorporated by reference. This multi-jurisdictional plan, approved in compliance with the Disaster Mitigation Act of 2000, provides long-term planning to reduce the impacts of future disasters.

4.6. Wildland and Urban Fire

Policies within this category relevant to the proposed Project are included in Section 4.20, Wildfire.

4.7. Kern County Emergency Plan

Policy 2: Monitor, enforce, and update, as appropriate, all emergency plans as needs and as conditions change.

Chapter 5: Energy Element

5.3. Petroleum Resources and Development

5.3.1. Urban/Residential Development in Petroleum Resource Areas

Policy 4: All oilfield development shall take place in accordance with regulations administered by ~~DOGGR~~ [CalGEM].

5.3.3. Waste Disposal in Petroleum Development

Policy 4: The County shall address hazardous oil field waste disposal issues in the Kern County and Incorporated Cities Hazardous Waste Management Plan policies and implementation measures.

5.3.6. Environmental Impacts of Petroleum Development

Policy 3: The County should attempt to ensure that the petroleum industry does not bear a burden of environmental regulation in excess of its contribution to the problems.

5.3.7. Processing and Transportation of Petroleum Products

Policy 3: The County shall encourage the development of new pipelines with alignments that provide for environmental and the public's health and safety protection.

Kern County Multi-Hazard Mitigation Plan. The purpose of the multi-hazard mitigation plan is to reduce or eliminate long-term risk to people and property from natural hazards and their effects in Kern County, California. The plan was updated in 2012 to help Kern County become less vulnerable to losses from future disasters. The multi-jurisdictional plan includes the County, and the incorporated municipalities of Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. This plan also covers 53 special districts that include school, recreation and park, water, community service, and other districts. Among the items assessed, the plan evaluated the risks associated with seismic events, dam failure, severe weather, and wildfire on oil and gas facilities.

Kern County Emergency Operations Plan. The Kern County Emergency Operations Plan (EOP) is an all-hazards document that provides for the integration and coordination of planning efforts of the County with those of its cities, special districts, and the state region. It provides a framework for the County of Kern to use in performing emergency functions before, during, and after an emergency event, natural disaster, or technological incident.

Kern County and Incorporated Cities Hazardous Waste Management Plan. The Kern County and Incorporated Cities Hazardous Waste Management Plan analyzes information on hazardous waste generation in the County, describes existing disposal facilities and assesses the need for new and expanded facilities, analyzes potential for waste reduction, and creates programs for local hazardous waste management.

4.9.3 Impact Analysis

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

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?

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?

Impact.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

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 or excessive noise for people residing or working in the project area?

Impact.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Impact.

4.9.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

•

4.10 HYDROLOGY AND WATER QUALITY

HYDROLOGY AND WATER QUALITY – Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in a substantial erosion or siltation of on- or off-site;	☐	☐	☐	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☐	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources or polluted runoff; or	☐	☐	☐	☐
iv) Impede or redirect flood flows?	☐	☐	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☐
e) Conflict with or obstruct implementation of a water quality	☐	☐	☐	☐

HYDROLOGY AND WATER QUALITY – Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
control plan or sustainable groundwater management plan?				

4.10.1 Environmental Setting

Discuss the following:

1. Spill impacts to nearby creeks, identify creeks
2. Distance to closest creek
3. Source of water
4. Produced water handling
5. Decrease groundwater supplies
6. Alter drainage patterns, alter stream areas
7. Erosion, siltation
8. Flood, tsunami seiche zones
9. Local water control plan or sustainable water plan

4.10.1.1 Hydrogeology and Hydrology

4.10.2 Regulatory Setting

Federal, State, and local regulations, laws, and policies pertaining to hydrology and water quality relevant to the Project are included below.

4.10.2.1 Federal

The Safe Drinking Water Act of 1974 (42 U.S.C. §300f et seq.). The SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes,

reservoirs, springs, and ground water wells. The SDWA authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water.

The regulations allow for disposal into aquifers that would otherwise meet the criteria for a USDW if the aquifers are determined to be exempt by the EPA in accordance with an exemption application and review process (40 CFR 146.4). For oil and gas production and Class II well operations, an aquifer may be designated as "exempted" if it does not currently serve as a source of drinking water and cannot currently or in the future serve as a source of drinking water because it is: (1) mineral, hydrocarbon, or geothermal energy producing, or can be demonstrated to contain commercially producible minerals or hydrocarbons; (2) situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical; or (3) so contaminated that it would be economically or technologically impractical to render the water fit for human consumption. The Project is located within the exempted Tulare B zone of the Tulare Formation which includes Potter Sands, Spellacy Sands, Miocene Shales/Warson Sands, and Antelope Sands within the MWSS Oil Field.

In 1983, California was granted primacy to regulate Class II wells under the SDWA and must meet Federal requirements for the UIC program, including construction, operating, monitoring and testing, reporting, and closure requirements for well owners or operators. All UIC injection activity in the State must be permitted by CalGEM. Class II well operators must meet well construction and conversion standards and perform regular testing and inspection to ensure well integrity. In general, the UIC regulations (40 CFR 146 et seq.) require that owners and operators of new Class II injection wells: (1) site wells in locations free of faults and other adverse geological features; (2) drill to a depth that allows the injection into formations that do not contain USDWs, or that contain only exempt aquifers, and that are confined from any other formation that may contain potential drinking water sources; (3) inject fluids through an internal pipe (tubing) that is located inside another pipe (casing), with cement placed between the outside pipe and the well borehole; (4) test well integrity at the time of completion and at least every five years thereafter; and (5) continuously monitor well integrity. CalGEM administers the UIC program for Class II wells in California.

4.10.2.2 State

Stormwater Discharge Regulations. The State Board has adopted a general NPDES permit for construction activities that disturb more than one acre of land (Construction General Permit, Order No. 2012-0006-DWQ, NPDES No. CAS000002) in compliance with the Federal Clean Water Act. The general permit applies to discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities. To comply with the general permit, as NOI must be filed with the RWQCB, and a SWPPP must be implemented at the commencement of grading and remain in effect until construction is completed. Construction-related pollutants must be controlled with the best available technology economically achievable and best conventional pollutant control technology (the BAT/BCT standard). The Construction General Permit also requires effluent monitoring and reporting, receiving water monitoring and reporting, a rain event action plan, project area soil characteristics and monitoring, new and redevelopment performance standards for water quality and hydromodification impacts, technology-based numeric action levels, and risk-based permitting.

Porter-Cologne Water Quality Control Act. The Porter–Cologne Water Quality Control Act (Porter-Cologne Act) authorizes regulation of California water rights and water quality by the SWRCB. The Porter–Cologne Act also established nine RWQCBs to ensure that water quality on local/regional levels is maintained. The Project Area is under the jurisdiction of the CVRWQCB.

California Toxics Rule. In 2000, the EPA promulgated Federal water quality standards for the State of California after previously adopted water quality objectives for toxic pollutants were overturned in a court proceeding. These Federal water quality standards are known as the California Toxics Rule (CTR) and have since been incorporated into regional basin plans, where applicable. The State Board has adopted a policy implementing the CTR (Resolution 2000-015, as amended by Resolution 2000-30). The CTR specifies water quality criteria for 128 priority pollutants based on toxicity to aquatic species, which are used as a basis for the establishment of effluent limitations in NPDES permits. The CTR is applicable to surfaced waters only.

Senate Bill 1281, Disclosure of Oil and Gas Water Use and Disposal. Senate Bill 1281 (SB 1281), effective January 2015, amended Sections 3226.3 and 3227 of the Public Resources Code to require that well operators provide CalGEM with quarterly information regarding the source and disposition of water produced by

or used in oil and gas production in addition to existing obligations to report gas and oil production and produced water information on a monthly basis.

Sustainable Groundwater Management Act. In 2014, California enacted the Sustainable Groundwater Management Act (Water Code §10720 et seq.). The Act, and related amendments to California law, require that all groundwater basins designated as high or medium priority in the Department of Water Resources (DWR) California Statewide Groundwater Elevation Monitoring (CASGEM) program, and that are subject to critical overdraft conditions, must be managed under a new Groundwater Sustainability Plan (GSP), or a coordinated set of GSPs. High- and medium-priority basins that are not subject to critical overdraft conditions must also be managed under a GSP. Where GSPs are required, one or more local groundwater sustainability agencies (GSAs) must be formed to cover the basin and prepare and implement applicable GSPs.

A GSA has the authority to require registration of groundwater wells, measure and manage extractions, require reports and assess fees, and to request revisions of basin boundaries, including establishing new subbasins. The Sustainable Groundwater Management Act defines groundwater as "water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water but does not include water that flows in known and definite channels. In January 2017, the Kern Groundwater Authority became the overseeing GSA for the Kern Subbasin in response to the SGMA. The Department of Water Resources designated the Kern Subbasin as high priority and consequently, the SGMA mandates GSPs be developed to become sustainable. The development of the GSP is to occur through one or more local public agencies that have water supply, water management or land use responsibilities within a groundwater basin. The West Kern Water District GSA has such authorities for the region surrounding the Project area. The GSP was adopted by the GSA in January 2019, but has not yet been approved by the DWR. The GSP does not identify oil and gas operations as a significant factor impacting any of the objectives of the Act in the subbasin.

CalGEM and UIC In California, wells that inject fluids associated with oil and natural gas production operations (Class II injection wells) also are regulated by CalGEM under its UIC Program. See Section 4.7, Geology.

4.10.2.3 Local

Kern County General Plan (2009)

Chapter 1: Land Use, Conservation, and Open Space Element

1.3. Physical and Environmental Constraints

Policy 11: Protect and maintain watershed integrity within Kern County.

1.9. Resource

Policy 10: To encourage effective groundwater resource management for the long-term economic benefit of the County the following shall be considered:

(a) Promote groundwater recharge activities in various zone districts.

Support for the development of Urban Water Management Plans and promote Department of Water Resources grant funding for all water providers.

Support the development of groundwater management plans.

Support the development of future sources of additional surface water and groundwater, including conjunctive use, recycled water, conservation, additional storage of surface water and groundwater and desalination.

Policy 11: Minimize the alteration of natural drainage areas. Require development plans to include necessary mitigation to stabilize runoff and silt deposition through utilization of grading and flood protection ordinances.

1.10. General Provisions

1.10.6. Surface Water and Groundwater

Policy 33: Water related infrastructure shall be provided in an efficient and cost effective manner.

Policy 34: Ensure that water quality standards are met for existing users and future development.

Policy 35: Ensure that adequate water storage, treatment, and transmission facilities are constructed concurrently with planned growth.

Policy 43: Drainage shall conform to the Kern County Development Standards and the Grading Ordinance.

Policy 44: Discretionary projects shall analyze watershed impacts and mitigate for construction related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by the California Environmental Quality Act (CEQA), to prevent the degradation of the watershed to the extent practical.

4.10.3 Impact Analysis

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Impact.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Impact.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in a substantial erosion or siltation of on- or off-site?
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources or polluted runoff?
iv. Impede or redirect flood flows?

Impact.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Impact. T

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact.

4.10.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

•

4.11 LAND USE AND PLANNING

LAND USE AND PLANNING – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Physically divide an established community?	☐	☐	☐	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☐

4.11.1 Environmental Setting

Discuss the following:

1. If in a designated oil field, otherwise, check zoning of local jurisdiction
2. Divides a community
3. Conflict with land use plan or policy

4.11.2 Regulatory Setting

There are no relevant Federal laws or regulations pertaining to land use and planning applicable to the Project. State and local laws, regulations, and policies applicable to land use and planning relevant to the Project are included below.

4.11.2.1 State

Senate Bill 375. Senate Bill (SB) 375 requires the Air Resources Board to set regional targets for GHG emission reductions from passenger vehicles and light duty trucks and requires each regional Metropolitan Planning Organization (MPOs) to adopt a Sustainable Communities Strategy (SCS) into its regional transportation plan that would allow the region to meet its GHG emission reduction target. The Kern County Council of Governments (COG) adopted the SCS for Kern County as part of its Regional Transportation Plan (RTP) in 2014. The RTP and SCS incorporate forecasted development patterns, modeling and measures designed to integrate land use and transportation planning to reduce local and regional GHG emissions. Oil and gas resources, as well as other land

uses, are components of the SCS. While SB 375 does not require local governments to amend their General Plans to implement the SCS, it provides incentives for them to do so. Implementation of SB 375 is expected to substantially reduce GHG emissions in the County and throughout the State.

Senate Bill 1137. The provisions of Senate Bill 1137 (Gonzalez, Chapter 385, Statutes of 2022) are currently stayed by operation of law pending a vote on a referendum against that legislation. SB 1137 prohibits the development of new oil and gas wells or infrastructure in health protection zones, as defined, except for purposes of public health and safety. The bill requires operators of existing oil and gas wells or infrastructure within health protection zones to undertake specified monitoring, public notice, and nuisance requirements. The bill requires CARB to consult and concur with CalGEM on leak detection and repair plans for these facilities, adopt regulations as necessary to implement emission detection system standards, and collaborate with CalGEM on public access to emissions detection data.

4.11.2.2 Local

Kern County General Plan (2009)

Chapter 1: Land Use, Conservation, and Open Space Element

1.2. Nonjurisdictional Land

Policy 3: The County retains the maximum discretion allowed by law over land use issues of local concern, which impact the development of private and public property in the County.

1.3. Physical and Environmental Constraints

Policy 1: Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained ((Map Code 2.1 (Seismic Hazard), Map Code 2.2 (Landslide), Map Code 2.3 (Shallow Groundwater), Map Code 2.5 (Flood Hazard), Map Codes from 2.6 – 2.9, Map Code 2.10 (Nearby Waste Facility), and Map Code 2.11 (Burn Dump Hazard)) to support such development unless appropriate studies establish that such development will not result in unmitigated significant impact.

Policy 7: Ensure effective slope stability, wastewater drainage, and sewage treatments in areas with steep slopes are adequate for development.

1.5. Special Treatment Areas

Policy 1: The land use map diagrams adopted for special treatment areas establish the land use patterns for these areas.

Policy 4: The County shall require the adoption of a specific plan prior to development approval in areas (1) designated Map Code 4.3 (Specific Plan Required) on the General Plan maps; (2) for a development classified as a Land Project (see Special Treatment Areas' Assumptions section for a definition of "Land Project"); or (3) proposing to amend a resource designation (Map Code 8.x) equal to or greater than 40 acres to commercial/industrial map codes. Until a Specific Plan is adopted, the Map Code 4.3 (Specific Plan Required) areas will have the following interim General Plan land use designation:

In areas designated Specific Plan Required the interim designations will reflect the existing zoning pattern pending the owner's or multiple owners' submission of an acceptable plan pursuant to stipulated guidelines found in Appendix C of this General Plan and subsequent County adoption of a Specific Plan. (Appendix C contains a summary of the Specific Plan Required areas).

1.7. Commercial

Policy 1: Kern County will promote a pattern of commercial development that contributes to the economic and physical development of existing unincorporated communities as well as to the incorporated cities.

Policy 3: The development of specialized clusters of related and mutually supportive commercial activities will be encouraged and supported in appropriate locations by means of the Zoning Ordinance and Specific Plans.

1.8. Industrial

Policy 4: Protect existing industrial designations from incompatible land use intrusion.

Policy 5: Provide for the clustering of new industrial development adjacent to existing industrial uses and along major transportation corridors.

Policy 7: Require that industrial uses provide design features such as screen walls, landscaping, increased height and/or setbacks, and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to light, noise, sound, and vibration.

1.9. Resource

Policy 15: Agriculture and other resource uses will be considered a consistent use in areas designated for Mineral and Petroleum Resource uses on the General Plan.

1.10. General Provisions

Policy 5: Higher density development and in-filling should be encouraged within urbanized and built-up areas of the County.

Chapter 5: Energy Element

5.3. Petroleum Resources and Development

5.3.1. Urban/Residential Development in Petroleum Resource Areas

Policy 1: The County shall continue to assure adequate minimum setbacks between wells and from any existing structure, as permitted by the Kern County Zoning Ordinance.

Policy 4: All oilfield development shall take place in accordance with regulations administered by ~~DOGGR~~ [CalGEM].

Policy 6: In areas where petroleum production occurs close to urban development, oil companies shall be encouraged to site equipment so as to avoid unnecessary disturbance to urban uses.

5.3.6. Environmental Impacts of Petroleum Development

Policy 3: The County should attempt to ensure that the petroleum industry does not bear a burden of environmental regulation in excess of its contribution to the problems.

5.3.7. Processing and Transportation of Petroleum Products

Policy 2: The County shall review proposed pipelines and their alignments for their conformity with the Land Use, Open Space, and Conservation Element of this General Plan.

5.4. Electric Resources and Generation

5.4.7. Transmission Lines

Policy 2: The County shall review all proposed transmission lines and their alignments for conformity with the Land Use, Conservation, and Open Space Element of this General Plan.

Kern County Code of Ordinances. *Title 17 – Building and Construction.* According to the Kern County Building Code "Section 17.08.060, Work exempt from permit," building permits shall not be required for the accepted oil field

activities listed below. The exemption does not apply where construction is part of a processing plant, refinery, cogeneration facility, or other similar activities as determined by the building official:

- Tanks that meet API or American Water Works Association (AWWA) standards and are supported directly upon grade (grade being the final ground surface elevation of the site prior to installation of the tank) with associated foundations if the ratio of height to diameter or width in the shortest direction does not exceed two to one. This also includes the associated equipment such as piping, walkways, stairs, guardrails, handrails, and ladders which are covered by OSHA.
- Processing equipment and pressure vessels which meet API, American Society of Mechanical Engineers (ASME), or ANSI standards and are supported directly upon grade (grade being the final ground surface elevation of the site prior to installation of the equipment or vessel) with associated foundations if the ratio of height to width in the shortest direction does not exceed one and one-half to one. This also includes the associated equipment such as piping, walkways, stairs, guardrails, handrails, and ladders which are covered by OSHA.
- Miscellaneous equipment that meets API, ASME, or ANSI standards and is mounted on skids or supported on flanges. Placement of this equipment on an at-grade concrete slab or similar foundation, without attaching it to resist uplift or overturning is considered part of the exempted activity.
- Flatwork or non-supporting concrete slabs.
- One-story detached accessory buildings that do not contain a workstation and are used as storage sheds, or, typically, unattended control or electrical enclosures or gauging sheds, provided the floor area does not exceed 120 square feet.
- Oil derricks, artificial lift equipment, and associated foundations.
- Pipe racks and associated foundations, if the structure height does not exceed 8 feet.
- Process piping.
- oil field containment walls not over 4 feet measured from the bottom of the footing to the top of the wall.

Exemption from a building permit does not abrogate the responsibility for obtaining clearance or permits from any other entity having jurisdiction over oil field activities. Construction of new or modifications to existing office buildings or any buildings intended for human occupancy are not exempt. HVAC replacements, or any other electrical or mechanical alteration or replacement that are subject to the California Energy Efficiency Standards are not exempt.

According to the Kern County Building Code "Section 17.28.040B Exempted Work", accepted oil field activities related to oil field drilling, such as oil field roads, drilling pads, and grading required for the setting of production equipment are not required to obtain a grading permit. This does not include access roads which lead from the public rights-of-way to the site of the oil field activity.

Kern County Zoning Ordinance—Chapter 19.98, Oil and Gas Production. The Kern County Zoning Ordinance contains 21 Zone Districts that function as base districts and are used to identify land uses in the unincorporated portions of the County.

Chapter 19.98 (Oil and Gas Production) of the Kern County Zoning Ordinance contains the procedures and standards that apply to all exploration drilling and production activities related to oil, gas, and other hydrocarbon substances carried out in unincorporated Kern County.

Oil and gas production activity within Kern County occurs within a boundary that encompasses the Project area. This oil and gas activities boundary area is divided into five tier areas. A large portion of the Project site north of SR 166 has an Oil and Gas Conformity Tier designation of Tier 1 with a small portion designated as Tier 2. Tier 1 areas are those which have a land use planning consideration for oil and gas activity as the primary land use. Within this area, the existing well and activity densities preclude almost all other uses except for passive uses such as grazing. Tier 2 areas are defined as all areas that are classified exclusive agriculture (A) or limited agriculture (A-1) districts, have agriculture as the primary surface land use, and are not included in Tier 1.

Per Section 19.98. 070 of the Kern County Zoning Ordinance, Tiers 1, 2, 3 and 5, except as provided in this section, no permitted use shall be established, no permitted development shall occur, and no building permit or grading permit shall be issued for any permitted use or development subject to this chapter until an oil and gas conformity review or minor activities review has been submitted to and approved by the planning director in accordance with the procedures set out in Sections 19.102.040 through 19.102.060 of this title.

4.11.3 Impact Analysis

a) Physically divide an established community?

Impact.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Impact.

4.11.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

•

4.12 MINERAL RESOURCES

MINERAL RESOURCES – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☐
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?	☐	☐	☐	☐

4.12.1 Environmental Setting

Discuss the following:

1. Loss of resource or availability

4.12.2 Regulatory Setting

There are no relevant State laws or regulations relevant to mineral resources applicable to the Project. Federal and local regulations, laws, and policies pertaining to mineral resources relevant to the Project are included below.

4.12.2.1 Federal

Surface Mining and Reclamation Act of 1975. The Surface Mining and Reclamation Act of 1975 (SMARA) was mandated in order to identify and protect mineral resources of statewide or regional significance and ensure that those resources are available when needed. SMARA requires the State Geologist to classify land into MRZs according to its known or inferred mineral potential. The primary goal of mineral land classification is to ensure that the mineral potential of land is recognized by local government decision makers and considered before land use decisions are made that could preclude mining.

4.12.2.2 Local

Kern County General Plan (2009)

Chapter 1: Land Use, Conservation, and Open Space Element

1.9. Resource

Policy 1: Appropriate resource uses of all types will be encouraged as desirable and consistent interim uses in undeveloped portions of the County regardless of General Plan designation.

Policy 2: In areas with a resource designation on the General Plan map, only industrial activities which directly and obviously relate to the exploration, production, and transportation of the particular resource will be considered to be consistent with this General Plan.

Policy 14: Emphasize conservation and development of identified mineral deposits.

Chapter 5: Energy Element

5.3. Petroleum Resources and Development

Policy 4: All oilfield development shall take place in accordance with regulations administered by CalGEM.

4.12.3 Impact Analysis

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

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?

Impact.

4.12.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

-

4.13 NOISE

NOISE – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 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?	☐	☐	☐	☐

4.13.1 Environmental Setting

Discuss the following:

1. Quantify noise levels of operational and construction equipment
2. Detail noise levels Leq hourly at night
3. Detail potential noise increment at night
4. Discuss local MC requirements for construction hours
5. Discuss local MC acceptable noise levels
6. Discuss distance to closest residential receptor
7. Vibration discussing using CalTrans guidance and distance to acceptable vibration levels
8. Airport land use plan within 2miles

4.13.1.1 General Characteristics of Noise

Noise is generally defined as unwanted or objectionable sound. Measurement of sound involves determining three variables: 1) magnitude, 2) frequency, and 3) duration. Human ears respond to a very wide range of sound pressures producing numbers of awkward size when sound pressures are related on an arithmetic (1, 2, 3…) scale. It is customary to express sound pressure level in decibels (dB), which are logarithmic (1, 10, 100…) ratios comparing sound pressures to a reference pressure. The reference pressure commonly used in noise measurement is 20 microPascals (µPa or rms), which is considered to be the quietest sound a normal young adult human ear can hear in the frequency range that the ear is most sensitive to. This sound level is assigned the value 0 dB. Higher intensity sound is perceived as louder. Sound intensity is commonly measured on a weighted scale [dBA or db(A)] to correct for the relative frequency response of the human ear. The "A-weighted" noise level de-emphasizes low and very high frequencies of sound in a manner similar to the human ear's de-emphasis of these frequencies (OSHA, 2013; AIHA, 2003).

Except under special conditions, a change in sound level of 1 dB cannot be perceived. Outside of the laboratory, a 3 dB change is considered a just-noticeable difference, and a change in level of at least 5 dB is required before any noticeable change in community response would be expected. Some typical sound pressure levels for common sounds are provided in Table 4.13-1.

When considering how noise could affect nearby sensitive receptors (residential dwellings, transient lodging, hospitals, and other long-term care facilities, public or private educational facilities, libraries, churches, and places of public assembly), it is important to understand how sound level diminishes as the distance from the source increases. For a "point" source (such as construction within a fixed area) of sound in free space, the rate at which the sound attenuates is inversely proportional to the square of the distance from the source. This means the sound level would drop 6 dB each time the distance from the source is doubled. Decibels, measuring sound energy, combine logarithmically. A doubling of sound energy (for instance, from two identical automobiles passing simultaneously) creates a 3 dB increase (i.e., the resultant sound level is the sound level from a single passing automobile plus 3 dB). When the difference between two sound levels is greater than about 10 dB, the lesser sound is negligible in terms of affecting the total level (OSHA, 2013).

Sound Level (dBA)	Typical Outdoor Noise Source	Typical Indoor Noise Sources	Typical Human Response/Effects
140	Carrier Jet takeoff (50 feet)	--	--Threshold for Pain--
130	Siren (100 feet) Live Rock Band	--	---Hearing Damage---
120	Jet takeoff (200 feet) Auto horn (3 feet)	--	--
110	Chain Saw Snow Mobile	--	---Deafening---
100	Lawn Mower (3 feet) Motorcycle (50 feet)	--	--
90	Heavy Duty Truck (50 feet)	Food Blender (3 feet)	---Very Loud---
80	Busy Urban Street, Daytime	Garbage Disposal (3 feet)	
70	Automobile (50 feet)	Vacuum Cleaner (9 feet)	---Loud---
60	Small plane at ¾ mi	Conversation (3 feet)	
50	Quiet Residential Daytime	Dishwasher Rinse (10 feet)	---Moderate---
40	Quiet Residential Nighttime	Quiet Home Indoors	---Quiet---
30	Slight Rustling of Leaves	Soft Whisper (15 feet)	---Very Quiet---
20	--	Broadcasting Studio	
10	--	Breathing	--Barely Audible--
0	--	--	--Threshold of Hearing--

Source: American Industrial Hygiene Association, 2003; OSHA, 2013

Table 4.13-1. Common Sound Levels/Sources and Subjective Human Responses

The duration of noise and the time period at which it occurs are important factors in determining the human response to sound. For example, noise induced hearing loss is directly related to the magnitude, frequency, and duration of exposure. Annoyance due to noise is also associated with how often noise is present and how long it persists. One approach to quantifying time-varying noise levels is to calculate the Energy Equivalent Sound Level (Leq) for the time period

of interest. The Leq represents a sound level which, if continuous, would contain the same total acoustical energy as the actual time-varying noise which occurs during the observation period (OSHA, 2013).

In a residential or other noise sensitive environment, noise is more disturbing at night than during the day. Thus, noise indices have been developed to account for the differences in intrusiveness between daytime and nighttime noise. The Community Noise Level Equivalent (CNEL) and the Day-Night Average Sound Level (Ldn) are such indices. CNEL and Ldn values result from the averaging of hourly Leq values for a 24-hour period, with a weighting factor applied to the nighttime Leq values (and the evening values for CNEL). The CNEL penalizes noise levels during the night (10:00 p.m. to 7:00 a.m.) by 10 dB to account for the increased sensitivity of people to noise after dark. Evening noise levels (7:00 p.m. to 10:00 p.m.) are penalized 5 dB by the CNEL. The Ldn also penalizes nighttime noise levels by 10 dB, but does not penalize evening levels. These two indices are generally equivalent. In general, the CNEL may be thought of qualitatively as an accumulation of noise associated with individual events occurring throughout a 24-hour period. The noise of each individual event is accounted for in a separate, discrete measurement that integrates the changing sound level over time as, for example, when an aircraft approaches, flies overhead, then continues off into the distance. These integrated sound levels for individual operations are referred to as Equivalent Sound Level. The accumulation of the Equivalent Sound Levels from each individual operation during a 24-hour period determines the CNEL for the day.

4.13.1.2 Noise Descriptors

Noise in our daily environment fluctuates over time. Some fluctuations are minor, but some are substantial. Some noise levels occur in regular patterns, but others are random. Some noise levels fluctuate rapidly, but others slowly. Some noise levels vary widely, but others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors most commonly used in noise analysis.

Leq represents an average of the sound energy occurring over a specified period. The 1-hour A-weighted equivalent sound level (Leq[h]) is the energy average of A-weighted sound levels occurring during a 1-hour period.

Percentile-Exceeded Sound Level (Lxx) represents the sound level exceeded for a given percentage of a specified period (e.g., L10 is the sound level exceeded 10 percent of the time, L50 is the sound level exceeded 50 percent of the time, and L90 is the sound level exceeded 90 percent of the time).

Maximum Sound Level (Lmax) is the highest instantaneous sound level measured during a specified period.

Ldn is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during nighttime hours between 10:00 p.m. and 7:00 a.m.

CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during the nighttime hours between 10:00 p.m. and 7:00 a.m., and a 5 dB penalty applied to the A-weighted sound levels occurring during evening hours between 7:00 p.m. and 10:00 p.m.

Sound from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, and the sound level attenuates (decreases) at a rate of 6 dB each time the distance doubles from a point or stationary source. Roadways, highways, and moving trains (to some extent) consist of several localized noise sources on a defined path; these are treated as "line" sources, which approximate the effect of several point sources. Sound levels attenuate at a rate of 3 dB for each time the distance doubles from a line source.

4.13.1.3 Ground-borne Vibration

In contrast to airborne noise, ground-borne vibration is not a common environmental problem. Vibration from sources such as buses and trucks are not usually perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving, and operating heavy earth-moving equipment.

Ground-borne vibration can cause detectable building floor movement, window rattling, items shaking on shelves or walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Human annoyance from vibration can often occur and can happen when the vibration exceeds the threshold of perception by only a small margin (refer to Table 4.13-2). A vibration level that causes annoyance would be well below the damage threshold for normal buildings (refer to Table 4.13-3).

Vibration is an oscillatory motion which can be described in terms of displacement, velocity, or acceleration. Displacement is the easiest descriptor to understand. For a vibrating floor, the displacement is simply the distance that a point on the floor moves away from its static position. The velocity represents the

instantaneous speed of the floor movement and acceleration is the rate of change of the speed. The peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak of the vibration signal. PPV is often used in monitoring of blasting vibration since it is related to the stresses that buildings undergo.

Human Response	Continuous/Frequent Intermittent Sources PPV (in/sec)
Barely perceptible	0.01
Distinctly perceptible	0.04
Strongly perceptible	0.10
Severe	0.4

Source: California Department of Transportation (Caltrans), 2013

Table 4.13-2. Vibration Annoyance Potential Criteria

Structure and Condition	Continuous/Frequent Intermittent Sources PPV (in/sec)	Continuous/Frequent Intermittent Sources Vibration Velocity (VdB)
Extremely fragile historic buildings, ruins, ancient monuments	0.08	88
Fragile buildings	0.1	90
Historic and some old buildings	0.25	94
Older residential structures	0.3	98
New residential structures	0.5	102
Modern industrial/ commercial buildings	0.5	102

Source: Caltrans, 2013; Federal Transit Administration (FTA), 2018

Table 4.13-3. Vibration Damage Potential Threshold Criteria

4.13.2 Regulatory Setting

Federal, State, and local regulations, laws, and policies pertaining to noise relevant to the Project are included below.

4.13.2.1 Federal

Occupational Safety and Health Act (OSHA) of 1970. On-site noise levels are regulated by the OSHA. This regulation protects workers from the effects of occupational noise exposure. The noise exposure level of workers is regulated at 90 dBA over an 8-hour work shift to protect hearing (29 CFR 1910.95). Employee exposure to levels exceeding 85 dBA requires that employers develop a hearing conservation program. Such programs include adequate warning, the provision of hearing protection devices, and periodic employee testing for hearing loss.

4.13.2.2 State

California Occupational Safety and Health Administration (Cal/OSHA). Cal/OSHA is responsible for implementing and enforcing noise exposure limits established OSHA within the State.

4.13.2.3 Local

Kern County General Plan (2009).

Chapter 3: Noise Element Policies

Policy 2: quire noise level criteria applied to all categories of land uses to be consistent with the recommendations of Cal/OSHA.

Policy 3: Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise.

Policy 4: Utilize good land use planning principles to reduce conflicts related to noise emissions.

Policy 7: Employ the best available methods of noise control.

Per the Kern County General Plan implementation measures proposed commercial and industrial uses or operation are to be designed or arranged so that they would not subject residential or other noise sensitive land uses to exterior noise levels in excess of 65 dB and interior noise levels in excess of 45 dB. The following in addition to residential land use are defined as a noise sensitive land use by the County:

- Schools.
- Hospitals,
- Parks and recreational areas,

- Religious facilities.

Chapter 5: Energy

5.2. Importance of Energy to Kern County

Policy 10: The County should require acoustical analysis for energy project proposals that might impact sensitive and highly-sensitive uses in accordance with the Noise Element of the General Plan.

Kern County Code of Ordinances

Per Kern County Code of Ordinance Chapter, 8.36.020 it is unlawful to create noise from construction, between the hours of 9:00 pm and 6:00 am on weekdays and 9:00 pm and eight 8:00 am on weekends, which is audible to a person with average hearing faculties or capacity at a distance of 150 feet from the construction site, if the construction site is within one thousand 1,000 feet of an occupied residential dwelling except as provided below:

The development services agency director or his designated representative may for good cause exempt some construction work for a limited time; and

Emergency work is exempt.

Per Kern County Zoning Ordinance Chapter 19.98.60 no oil or gas well shall be drilled within 100 feet of any public highway or building not necessary to the operation of the well, or within 210 feet of any sensitive receptor, or within 300 feet of public or private school.

4.13.3 Baseline Noise Levels

4.13.4 Impact Analysis

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact.

b) Generation of excessive groundborne vibration or groundborne noise levels?

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?

Impact.

4.13.5 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

•

4.14 POPULATION AND HOUSING

POPULATION AND HOUSING – Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☐
b) Displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☐

4.14.1 Environmental Setting

4.14.2 Regulatory Setting

There are no Federal or State laws, regulations, or policies pertaining to population and housing that are relevant to the Project.

4.14.2.1 Local

2015 Regional Transportation Plan/Sustainable Communities Strategy (SCS). In July 2022, the Kern COG adopted a SCS for the Kern Region that implements Senate Bill 375, California's Sustainable Communities and Climate Protection Act. The SCS integrates transportation planning, greenhouse gas reductions from passenger vehicles and light-duty trucks, and regional housing needs with a forecasted development pattern that acknowledges Kern County's and the incorporated cities' General Plan programs. The SCS acknowledges the importance of energy resources, including oil and gas production, as an important resource and industry to Kern County's economy and future growth.

4.14.3 Impact Analysis

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Impact.

b) Displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere?

Impact.

4.14.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

•

4.15 PUBLIC SERVICES

PUBLIC SERVICES	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) 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:				
i) Fire protection?	☐	☐	☐	☐
ii) Police Protection?	☐	☐	☐	☐
iii) Schools?	☐	☐	☐	☐
iv) Parks?	☐	☐	☐	☐
v) Other public facilities?	☐	☐	☐	☐

4.15.1 Environmental Setting

Discuss the following:

1. Impacts on fire response need to be discussed relative to historical fire response requirements
2. Impact to new infrastructure, need for new infrastructure, parks, schools, etc
3. Discuss area service providers (fire, police, schools, parks)

4.15.2 Regulatory Setting

There are no Federal or State laws, regulations, or policies pertaining to public services that are relevant to the Project. Local regulations, laws, and policies pertaining to public services relevant to the Project are included below.

4.15.2.1 Local

Kern County General Plan (2009)

Chapter 1: Land Use, Conservation, and Open Space Element

1.4. Public Facilities and Services

Policy 1: New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.

Policy 8: Environmentally safe locations for the disposal of solid waste will be assured by locating sites in accordance with the criteria set forth in Appendix E of this General Plan.

1.10. General Provisions

1.10.1. Public Services and Facilities

Policy 9: New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure which it generates and upon which it is dependent.

Policy 12: All methods of sewage disposal and water supply shall meet the requirements of the Kern County Environmental Health Services Department and the California Regional Water Quality Control Board. The Environmental Health Department shall periodically review and modify, as necessary, its requirements for sewage disposal and water supply, and shall comply with any new standards adopted by the State for implementation of Government Code Division 7 of the Water Code, Chapter 4.5 (Section 13290-13291.7). (Assembly Bill 885)(2000).

Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act (CEQA) documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.

Policy 16: The developer shall assume full responsibility for costs incurred in service extensions or improvements that are required to serve the Project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.

Kern County Unit Strategic Fire Plan. The Kern County Fire Department's 2021 Unit Strategic Fire Plan was developed collaboratively between Federal, State, City, and County agencies to identify and prioritize fire management strategies. The plan is designed to be an assessment and planning tool. The plan documents the wildland fire situation throughout the State Responsibility Areas (SRA) within the County. The SRA is the area where the State of California is financially responsible for the prevention and suppression of wildfires. The goal of this plan is to reduce costs and losses from wildfire by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success.

Although there are SRAs surrounding the Project area, the immediate Project site is located largely within a Federal Responsibility Area with a smaller portion located within a Local Responsibility Area.

Kern County Multi-Hazard Mitigation Plan. The purpose of the multi-hazard mitigation plan is to reduce or eliminate the long-term risk to people and property from natural hazards and their effects in the County. The plan was updated in 2020 to help Kern County become less vulnerable to losses from future disasters. The multijurisdictional plan includes the County and the incorporated municipalities of Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. This plan also covers 53 special districts that include school, recreation and park, water, community service, and other districts. Among the items assessed, the plan evaluated the risks associated with seismic events, dam failure, severe weather, and wildfire on oil and gas facilities.

Capital Improvement Plan and Public Facilities Mitigation Program. The changing fiscal landscape in California during the past 30 years has steadily undercut the financial capacity of local governments to fund infrastructure. Faced with these trends, the County has adopted a policy of "growth pays its own way" through use of a public facilities mitigation program. The primary policy objective of this program is to ensure that new development pays the capital costs associated with growth.

In 2008, the County adopted a Capital Improvement Plan (CIP) that identifies the best current understanding of the public facilities that will be needed to accommodate new development anticipated through 2030. The CIP further identified appropriate existing facility demand standards to be used as a basis for estimating future facility needs and level of service. The adopted CIP includes a summary of proposed service levels for the included facilities and a conceptual list of planned projects, upon which the CIP was based. The scope of services includes: parks, libraries, sheriff (public protection and investigation), fire, animal control, public health, landfill/transfer stations, and general government. Roads and sewer costs and impacts are not part of the program.

Continued growth within the County and the associated impacts resulting from that growth have increased the demands to Countywide public services and have made it difficult to not only implement and fund many of those facilities identified within the CIP but maintain existing public service demand standards as growth occurs. In short, despite the increase in property taxes generated as a result of the proposed Program and other similar projects within the County, public

facility impacts are still underfunded and unable to maintain existing and adopted facility standards.

The purpose of the Public Facilities Mitigation Program is to identify impacts on public services and identify the monetary CEQA mitigation necessary to meet the facilities associated with that growth. The following categories have been identified to help determine which specific public needs are impacted by a typical development project.

4.15.3 Impact Analysis

a) 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?

Impact.

4.15.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

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4.16 RECREATION

RECREATION	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☐
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?	☐	☐	☐	☐

4.16.1 Environmental Setting

Discuss the following:

1. Note distance to closest recreational resource
2. Would increase use of rec facilities
3. Does project include rec facilities

4.16.2 Regulatory Setting

4.16.3 Impact Analysis

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?

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?

Impact.

4.16.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

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4.17 TRANSPORTATION

TRANSPORTATION – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Conflict with a Project, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	☐	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☐
d) Result in inadequate emergency access?	☐	☐	☐	☐

4.17.1 Environmental Setting

Discuss the following

1. Conflict with a local plan, policy, ordinance
2. Conflict with pedestrian, bicycle issues
3. VMT issues
4. Roadway geometric design issues
5. Emergency access issues

4.17.2 Regulatory Setting

There are no Federal laws, regulations, or policies potentially applicable to this Project relevant to transportation. State and local laws, regulations, and policies pertaining to transportation relevant to the Project are included below.

4.17.2.1 State

California Department of Transportation (Caltrans) Regulations. Caltrans has jurisdiction over state highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on California highways. Kern County is under the jurisdiction of Caltrans District 6. The following Caltrans regulations apply to the potential transportation impacts of the Project:

California Vehicle Code, Division 15, Chapters 1 through 5 (Size, Weight, and Load). Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways; and

California Street and Highway Code, Sections 660-711, 670-695. Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of State and County highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

These State regulations would relate to the haul of heavy equipment and materials to the Project area during construction. Trucking companies and the proposed Project must comply with these regulations.

4.17.2.2 Local

CEQA Guidelines section 15064.3(b) indicates that vehicle miles traveled (VMT) is the most appropriate measure for transportation impacts.

Kern County has not adopted VMT thresholds for proposed development projects within the County.

Kern County General Plan (2009)

Chapter 1: Land Use, Conservation, and Open Space Element

1.10. General Provisions

1.10.9. Economic Development

Policy 54: Recognize the importance of major transportation corridors, airports, and rail lines as important economic tools for the establishment of commercial and industrial development and promotion.

Chapter 2: Circulation Element

2.3. Highways

2.3.3. Highway Plan

Policy 3: This plan's road width standards are listed below. These standards do not include State highway widths that would require additional right-of-way for rail transit, bike lanes and other modes of transportation. Kern County shall consider these modifications on a case-by-case basis.

Expressway [Four Travel Lanes] Minimum 110 foot right-of-way

Arterial [Major Highway] Minimum 110 foot right-of-way; County Standard 110 feet

Collector [Secondary Highway] Minimum 90 foot right-of-way; County Standard 90 feet

Commercial-Industrial Street Minimum 60 foot right-of-way; County Standard 60 feet

Local Street [Select Local Road] Minimum 60 foot right-of-way; County Standard 60 feet

2.4. Priority Focus Area Topics-Highway

2.4.7. Taft Area

The Project area falls under the Taft Area topic of the Kern County General Plan for Highways (2009). Policies within this section relevant to the Project are included below.

Policy 3: The County should monitor development applications as they relate to traffic generation developed for this plan. If traffic resulting from projects such as General Plan amendment(s) would exceed current volume to capacity projections, mitigation is required if development causes roadways to fall below LOS D and LOS C for Caltrans roadways. Utilization of the CEQA process would help identify alternatives to, or mitigation for such developments. Mitigation could involve amending the Land Use, Open Space and Conservation Element to establish jobs - housing balance. This is triggered if projected trips in any traffic zone exceed trips identified for this Circulation Element. Mitigation could involve exactions to build off-site transportation facilities. These enhancements would reduce traffic congestion impacts.

2.5. Other Modes

2.5.1. Trucks and Highways

Policy 1: California Department of Transportation (Caltrans) should be made aware of the heavy truck activity on Kern County's roads.

4.17.3 Impact Analysis

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Impact.

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

Impact.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impact.

d) Result in inadequate emergency access?

Impact.

4.17.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

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4.18 TRIBAL CULTURAL RESOURCES

TRIBAL CULTURAL RESOURCES	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 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.	☐ ☐	☐ ☐	☐ ☐	☐ ☐

4.18.1 Environmental Setting

Discuss the following:

1. Tribal resources
2. Listed resource

4.18.2 Regulatory Setting

Under AB 52, lead CEQA agencies must avoid damaging effects on tribal cultural resources, when feasible, whether consultation occurred or is required.

4.18.3 Impact Analysis

a) 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:

Impact.

4.18.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

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4.19 UTILITIES AND SERVICE SYSTEMS

UTILITIES AND SERVICE SYSTEMS – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☐
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☐
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☐
e) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☐

4.19.1 Environmental Setting

Discuss the following:

1. Discuss wastewater disposal

2. Discuss amount of freshwater use and relative to provider or aquifer withdraw thresholds
3. Discuss electrical use relative to field-wide historical use
4. Changes to existing infrastructure (water, power, etc)
5. Sufficient water supply, and lists provider
6. Waste water processing, and lists provider
7. Solid waste capacity, and reduction statues

4.19.2 Regulatory Setting

There are no Federal laws, policies or regulations applicable to the proposed Project relevant to utilities and service systems. State and local regulations, laws, and policies pertaining to utilities and service systems relevant to the Project are included below.

4.19.2.1 State

Sustainable Groundwater Management Act. In 2014, California enacted the Sustainable Groundwater Management Act (Water Code Section 10720 et seq.). The Act, and related amendments to California law, require that all groundwater basins designated as high- or medium-priority in the DWR CASGEM program and that are subject to critical overdraft conditions must be managed under a new GSP, or a coordinated set of GSPs, by January 31, 2020. High- and medium-priority basins that are not subject to critical overdraft conditions must be managed under a GSP. Where GSPs are required, one or more local GSAs must be formed to cover the basin and prepare and implement applicable GSPs. The Act does not apply to basins that are managed under a court-approved adjudication, or to low-or very–low-priority basins.

The Act defines groundwater as "water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water, but does not include water that flows in known and definite channels." A groundwater extraction facility is defined as "a device or method for extracting groundwater from within a basin" Water Code Section 10721(g-h).

The Project area is located within the service area of the West Kern Water District GSA and is accounted for in the West Kern Water District GSP. The GSP does not identify oil and gas operations as a significant factor impacting any of the objectives of the Act in the subbasin.

California Integrated Waste Management Act (AB 939). California adopted its first statewide, general recycling program in 1989. The Integrated Waste Management Act of 1989 (PRC 40050 et seq. or AB 939, codified in PRC 40000), administered by CalRecycle, requires all local and county governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills.

4.19.2.2 Local

Kern County General Plan (2009)

Chapter 1: Land Use, Conservation, and Open Space

1.4. Public Facilities and Services

Policy 1: New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.

Policy 3: Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.

Policy 13: The County shall ensure landfill capacity for the residents and industry of Kern County.

Kern County and Incorporated Cities Integrated Waste Management Plan. The Kern County and Incorporated Cities Integrated Waste Management Plan addresses issues pertaining to nonhazardous waste disposal and other waste facilities.

4.19.3 Impact Analysis

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Impact.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Impact.

c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Impact.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Impact.

e) Comply with federal, state, and local statutes and regulations related to solid waste?

Impact.

4.19.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

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4.20 WILDFIRE

WILDFIRE – If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☐
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?	☐	☐	☐	☐

4.20.1 Environmental Setting

Discuss the following:

1. Discuss distance to high fire hazard areas
2. Slope, that exacerbate wildfire risk
3. Installation of infrastructure that could exacerbate risk (electric power lines, etc)
4. Discuss hot work construction that could cause fires and preventative measures.
5. Fire induced flooding or landslides

6. Discuss fire zone of project
7. Discuss if SRA or LRA
8. Discuss coordination with fire department

4.20.2 Regulatory Setting

There are no Federal laws, regulations, or policies pertaining to wildfire that are relevant to the Project. State, local regulations, laws, and policies pertaining to wildfire relevant to the Project are included below.

4.20.2.1 State

State policies on SRA and LRA response

4.20.2.2 Local

Kern County General Plan (2009)

Chapter 4: Safety Element

4.6. Wildland and Urban Fire

Policy 1: Require discretionary projects to assess impacts on emergency services and facilities.

Policy 3: The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.

Policy 6: All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.

Kern County Fire Code. The Kern County Fire Code (Section 17.32) regulates the safeguarding of life, property, and public welfare to a reasonable degree from the hazards of fire, hazardous materials release and explosion arising from the storage, use and handling of dangerous and hazardous materials, substances and devices, conditions hazardous to life or property in the occupancy and the use of buildings and premises, the operation, installation, construction, location, safeguarding and maintenance of attendant equipment, the installation and maintenance of adequate means of egress not provided for

by the Building Code, and providing for the issuance of permits and collection of fees.

4.20.3 Impact Analysis

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

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?

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?

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?

Impact.

4.20.4 Mitigation Measures

The Project would not result in significant impacts; therefore, no mitigation is required

Or

Implementation of the following mitigation measures would reduce the potential impacts to less than significant:

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4.21 MANDATORY FINDINGS OF SIGNIFICANCE

MANDATORY FINDINGS OF SIGNIFICANCE –	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects.)	☐	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☐

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Impact.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects.)

Impact.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Impact.

5.0 MITIGATION MONITORING AND REPORTING PROGRAM

Ensure that:

1. Mitigation measures match those in the text
2. Mitigation measures are applicable and enforceable

Mitigation Monitoring and Reporting Program						
Impact (Class)	**Mitigation Measure (MMs)**	**Location**	**Monitoring/ Reporting Action**	**Effectiveness Criteria**	**Responsible Agency**	**Timing**

6.0 REFERENCES

6.1 BIBLIOGRAPHY

6.2 LIST OF PREPARERS