

Draft Environmental Impact Report

SCH# 2018101060

Volume 1

Chapters 1 through 11

SOUTH KERN COMPOST MANUFACTURING FACILITY PROJECT

by South Kern Industrial Center, LLC (*PP18125*)

Modification to Conditional Use Permit 2, Map #158



Kern County
Planning and Natural Resources Department
Bakersfield, California

October 2021

Lorelei H. Oviatt, AICP, Director
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2323
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**PLANNING AND NATURAL
RESOURCES DEPARTMENT**

Planning
Community Development
Administrative Operations

October 7, 2021

File: Mod. to CUP 2, Map #158

TO: See Attached Distribution List

FROM: Kern County Planning and Natural
Resources Department
Attn: Johnathan Jensen, Planner II
2700 "M" Street, Suite 100
Bakersfield, CA 93301
(661) 862-8638
JensenJ@kerncounty.com

**Re: Draft Environmental Impact Report for the South Kern Compost Manufacturing Facility by
South Kern Industrial Center, LLC (PP18125) (SCH #2018101060)**

Kern County has prepared a Draft Environmental Impact Report (Draft EIR) for the above-noted proposed modifications to the existing Conditional Use Permit (CUP) No. 2, Map No. 158 for the South Kern Industrial Center Composting Facility.

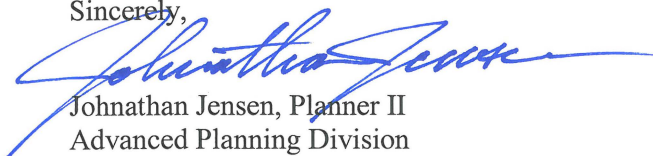
PROJECT LOCATION: The project is located at 2653 Santiago Road and is entirely within Section 24, Township 32 South, Range 25 East, in the Mount Diablo Base and Meridian (Sec 24, T32S, R25E, M. D. B. & M.). The project site is bound by Santiago Road to the north and solar sites to the east, west, and south. The entrance to the project site is located on Santiago Road off South Lake Road at the San Joaquin Valley Railroad crossing.

PROJECT DESCRIPTION: The project proponent is requesting: modifications to CUP No. 2, Map No. 158 which consist of increasing the types of composting feedstocks accepted at the facility, including digestate, in response to Assembly Bill 1826 and Senate Bill 1383 requirements; installing new equipment to be used as part of pre-processing and post-composting operations, including, but not limited to grinders, electrical screens, etc., to improve composting efficiency and capability; increasing all pile heights from 15 feet to 20 feet, including, but not limited to, receiving, mixing, composting, curing, screening, and finished product; and increasing storage time of finished compost product from 7 days to 180 days to accommodate seasonal markets and be consistent with regulatory permitting requirements.

The Kern County Planning and Natural Resources Department, as Lead Agency, has determined that preparation of an Environmental Impact Report would be appropriate for the referenced project. Enclosed is a copy of the Draft EIR.

The comment period for this document closes on **November 22, 2021, at 5:00 P.M.** Comments can be submitted to the address above or e-mailed to JensenJ@kerncounty.com If we have not received comment by the close of the comment period, we will assume that you have no comments regarding this Draft EIR.

Sincerely,



Johnathan Jensen, Planner II
Advanced Planning Division

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Synagro
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an 9/7/2021

City of Arvin
P.O. Box 548
Arvin, CA 93203

Bakersfield City Planning Dept
1715 Chester Avenue
Bakersfield, CA 93301

Bakersfield City Public Works Dept
1501 Truxtun Avenue
Bakersfield, CA 93301

California City Planning Dept
21000 Hacienda Blvd.
California City, CA 93515

Delano City Planning Dept
P.O. Box 3010
Delano, CA 93216

City of Maricopa
P.O. Box 548
Maricopa, CA 93252

City of McFarland
401 West Kern Avenue
McFarland, CA 93250

City of Ridgecrest
100 West California Avenue
Ridgecrest, CA 93555

City of Shafter
336 Pacific Avenue
Shafter, CA 93263

City of Taft
Planning & Building
209 East Kern Street
Taft, CA 93268

City of Tehachapi
Attn: John Schlosser
115 South Robinson Street
Tehachapi, CA 93561-1722

City of Wasco
764 E Street
Wasco, CA 93280

Inyo County Planning Dept
P.O. Drawer "L"
Independence, CA 93526

Kings County Planning Agency
1400 West Lacey Blvd, Bldg 6
Hanford, CA 93230

Los Angeles Co Reg Planning Dept
320 West Temple Street
Los Angeles, CA 90012

San Bernardino Co Planning Dept
385 North Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182

San Luis Obispo Co Planning Dept
Planning and Building
976 Osos Street
San Luis Obispo, CA 93408

Santa Barbara Co Resource Mgt Dept
123 East Anapamu Street
Santa Barbara, CA 93101

Tulare County Planning & Dev Dept
5961 South Mooney Boulevard
Visalia, CA 93291

Ventura County RMA Planning Div
800 South Victoria Avenue, L1740
Ventura, CA 93009-1740

U.S. Bureau of Land Management
Caliente/Bakersfield
3801 Pegasus Drive
Bakersfield, CA 93308-6837

U. S. Fish & Wildlife Service
Division of Ecological Services
2800 Cottage Way #W-2605
Sacramento, CA 95825-1846

Environmental Protection Agency
Region IX Office
75 Hawthorn Street
San Francisco, CA 94105

U.S. Dept of Agriculture/NRCS
5080 California Avenue, Ste 150
Bakersfield, CA 93309-0711

State Air Resources Board
Stationary Resource Division
P.O. Box 2815
Sacramento, CA 95812

So. San Joaquin Valley Arch Info Ctr
California State University of Bkfd
9001 Stockdale Highway
Bakersfield, CA 93311

Caltrans/Dist 6
Planning/Land Bank Bldg.
P.O. Box 12616
Fresno, CA 93778

State Dept of Conservation
Director's Office
801 "K" Street, MS 24-01
Sacramento, CA 95814-3528

State Dept of Conservation
Geologic Energy Management Division
4800 Stockdale Highway, Ste 108
Bakersfield, CA 93309

California State University
Bakersfield - Library
9001 Stockdale Highway
Bakersfield, CA 93309

California Fish & Wildlife
1234 East Shaw Avenue
Fresno, CA 93710

State Dept of Food & Agriculture
1220 "N" Street
Sacramento, CA 95814

California Highway Patrol
Planning & Analysis Division
P.O. Box 942898
Sacramento, CA 94298-0001

Integrated Waste Management
P.O. Box 4025, MS #15
Sacramento, CA 95812-4025

Public Utilities Comm Energy Div
505 Van Ness Avenue
San Francisco, CA 94102

California Regional Water Quality
Control Board/Central Valley Region
1685 E Street
Fresno, CA 93706-2020

California Regional Water Quality
Control Board/Lahontan Region
15095 Amargosa Road - Bld 2, Suite 210
Victorville, CA 92392

CalRecycle
Dept of Resources, Recycling, and
Recovery
1001 "I" Street
Sacramento, CA 95812

Kern County
Agriculture Department

Kern County Administrative Officer

Kern County Public Works Department/
Building & Development/Floodplain

Kern County Public Works Department/
Building & Development/Survey

Kern County
Env Health Services Department

Kern County Fire Dept
David Witt, Fire Chief

Kern County Fire Dept
Cary Wright, Fire Marshall

Kern County Library/Beale
Local History Room

Kern County Library/Beale
Andie Sullivan

Kern County Public Works Department/
Building & Development/Development
Review

Kern County Parks & Recreation

Kern County Sheriff's Dept
Administration

Kern High School Dist
5801 Sundale Avenue
Bakersfield, CA 93309

Kern County Public Works
Department/Operations &
Maintenance/Regulatory Monitoring &
Reporting

Lakeside Union School Dist
14535 Old River Road
Bakersfield, CA 93311

Wheeler Ridge-Maricopa Water Dist
12109 Highway 166
Bakersfield, CA 93313-9630

Kern County Superintendent of Schools
Attention School District Facility Services
1300 - 17th Street
Bakersfield, CA 93301

KernCOG
1401 19th Street - Suite 300
Bakersfield, CA 93301

San Joaquin Valley
Air Pollution Control District
1990 East Gettysburg Avenue
Fresno, CA 93726

Henry Miller Water Dist
P.O. Box 9759
Bakersfield, CA 93389

Kern County Water Agency
P.O. Box 58
Bakersfield, CA 93302-0058

Center on Race, Poverty
& the Environment
Attn: Marissa Alexander
1999 Harrison Street – Suite 650
San Francisco, CA 94612

West Side Mosquito
Abatement Dist.
P.O. Box 205
Taft, CA 93268

Adams, Broadwell, Joseph & Cardozo
Attention: Janet M. Laurain
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

Native American Heritage Council
of Kern County
Attn: Gene Albitre
3401 Aslin Street
Bakersfield, CA 93312

Center on Race, Poverty
& the Environmental/
CA Rural Legal Assistance Foundation
1012 Jefferson Street
Delano, CA 93215

Defenders of Wildlife/
Kim Delfino, California Dir
980 - 9th Street, Suite 1730
Sacramento, CA 95814

Southern California Gas Co
35118 McMurtrey Avenue
Bakersfield, CA 93308-9477

Pacific Gas & Electric Co
Land Projects
650 "O" Street, First Floor
Fresno, CA 93760-0001

Sierra Club/Kern Kaweah Chapter
P.O. Box 3357
Bakersfield, CA 93385

Chumash Council of Bakersfield
2421 "O" Street
Bakersfield, CA 93301-2441

Southern California Gas Co
Transportation Dept
9400 Oakdale Avenue
Chatsworth, CA 91313-6511

Verizon California, Inc.
Attention Engineering Department
520 South China Lake Boulevard
Ridgecrest, CA 93555

Kern Valley Indian Council
Historic Preservation Office
P.O. Box 401
Weldon, CA 93283

David Laughing Horse Robinson
P.O. Box 20849
Bakersfield, CA 93390

Kern Valley Indian Council
Attn: Robert Robinson, Chairperson
P.O. Box 401
Weldon, CA 93283

Kitanemuk & Yowlumne Tejon Indians
Chairperson
115 Radio Street
Bakersfield, CA 93305

Santa Rosa Rancheria
Ruben Barrios, Chairperson
P.O. Box 8
Lemoore, CA 93245

Tejon Indian Tribe
Kathy Morgan, Chairperson
1731 Hasti-acres Drive, Suite 108
Bakersfield, CA 93309

San Fernando Band of Mission Indians
Attn: John Valenzuela, Chairperson
P.O. Box 221838
Newhall, CA 91322

Tubatulabals of Kern County
Attn: Robert Gomez, Chairperson
P.O. Box 226
Lake Isabella, CA 93240

Tule River Indian Tribe
Neal Peyron, Chairperson
P.O. Box 589
Porterville, CA 93258

LIUNA
Attn: Danny Zaragoza
2201 "H" Street
Bakersfield, CA 93301

Joyce LoBasso
P.O. Box 6003
Bakersfield, CA 93386

Leadership Counsel for Justice &
Accountability
1527 - 19th Street, Suite 212
Bakersfield, CA 93301

Torres Martinez Desert Cahuilla Indians
Attn: Michael Mirelez,
Cultural Resources Coordinator
P.O. Box 1160
Thermal, CA 92274

Lozeau Drury LLP
1939 Harrison Street, Suite 150
Oakland, CA 94612

Rosedale-Rio Bravo Water Dist
P.O. Box 20820
Bakersfield, CA 93390-0820

Twenty-Nine Palms Band of Mission
Indians
Attn: Anthony Madrigal Jr.,
Tribal Grants Administrator
46-200 Harrison Place
Coachella, CA 92236

San Manuel Band of Mission Indians
Attn: Jessica Mauck,
Cultural Resources Analyst
26569 Community Center Drive
Highland, CA 92346

Twenty-Nine Palms Band of Mission
Indians
Attn: Darrell Mike, Tribal Chairman
46-200 Harrison Place
Coachella, CA 92236

Tejon Indian Tribe
Attn: Collin Rambo, Cultural Resource
Management Technician
1731 Hasti Acres Dr., Suite 108
Bakersfield, CA 93309

**NOTICE OF AVAILABILITY FOR PUBLIC REVIEW AND HEARING ON
THE DRAFT ENVIRONMENTAL IMPACT REPORT
FOR THE PROPOSED SOUTH KERN COUNTY COMPOSTING MANUFACTURING
FACILITY PROJECT**

This is to advise that the Kern County Planning and Natural Resources Department has prepared an Environmental Impact Report (EIR) for the project identified below. As mandated by State law, the minimum public review period for this document is 45 days.

PROJECT TITLE: South Kern Compost Manufacturing Facility by South Kern Industrial Center, LLC (PP18125); Kern County Franchise Agreement (PP18125) (SCH #2018101060)

PROJECT LOCATION: The proposed project site is located in the Valley Region in the western portion of unincorporated Kern County, California near the unincorporated communities of San Emidio, Lakeview, Dustin Acres, and Valley Acres and is bound by Santiago Road to the north and solar sites to the east, west, and south and is entirely within Section 24, Township 32 South, Range 25 East (MDB&M).

DOCUMENT AVAILABILITY: The document and documents referenced in the Draft EIR are available for review at the Planning Natural Resources Department, 2700 "M" Street, Suite 100, Bakersfield, CA 93301 or on the Departmental website (<https://kernplanning.com/planning/environmental-documents/>).

PUBLIC HEARING AND COMMENT: Kern County is soliciting comments on the adequacy and completeness of the analysis and proposed mitigation measures described in the Draft EIR. You may comment by providing testimony at the public hearing on:

DATE: January 27, 2022

TIME: 7:00 P.M. or soon thereafter

LOCATION: Chambers of the Board of Supervisors
Kern County Administrative Center, First Floor
1115 Truxtun Avenue, Bakersfield, CA

And/or submitting written comments to the project planner identified below prior to the close of the public comment period on November 22, 2021 at 5:00 p.m.

Testimony at future public hearings may be limited to those issues raised during the public review period either orally or submitted in writing.

HOW TO COMMENT: You may provide testimony at the public hearing on the date and time specified above or provide written comments prior to the close of public comment period on November 22, 2021 at 5:00 p.m. to:

**Kern County Planning and Natural Resources Department
ATTN: Johnathan Jensen, Planner II
2700 "M" Street, Suite 100, Bakersfield, CA 93301
Phone: (661) 862-8638
E-mail: JensenJ@kerncounty.com**

Please limit comments to environmental issues such as traffic, biology, noise, etc.

PROJECT DESCRIPTION: The project proponent is requesting: Modifications to Conditional Use Permit No. 2, Map No. 158, which consist of increasing the types of composting feedstocks accepted at the facility, including digestate, in response to Assembly Bill 1826 and Senate Bill 1383 requirements; installing new equipment to be used as part of pre-processing and post-composting operations, including, but not limited to grinders, electrical screens, etc., to improve composting efficiency and capability; increasing all pile heights from 15 feet to 20 feet, including, but not limited to, receiving, mixing, composting, curing, screening, and

finished product; and increasing storage time of finished compost product from seven (7) days to 180 days to accommodate seasonal markets and be consistent with regulatory permitting requirements.

ENVIRONMENTAL REVIEW FINDINGS: Anticipated significant and unavoidable impacts on the Air Quality resources area.

LORELEI H. OVIATT, AICP, Director

Planning and Natural Resources Department

To be published once only on next available date and as soon as possible

DAILY MIDWAY DRILLER

JJ:cc (09/14/21)

cc: County Clerk (2) (with fee)
Environmental Status Board
Sierra Club/Kern Kaweah Chapter
LiUNA
Supervisory District No. 2

California Native Plant Society/Kern Chapter
Kern County Archaeological Society
Native American Heritage Pres. Council/Kern County
Center on Race, Poverty and Environment (2)

CUP MOD 2, Map 158 NOP
cc 09/18/2018
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158cupmod2.nop.apn.docx

220 110 79 00 6 **INC**
ALGONQUIN PWR BAK LAND
HOLDINGS LLC
354 DAVIS RD
*

220 110 80 00 8
BAKERSFIELD CRUDE TERMINAL
LLC
333 CLAY ST # 1600
HOUSTON TX 77002

220 110 08 00 0
C & A FARMS LLC
1306 W HERNDON AV STE 101
FRESNO CA 937117183

220 110 58 00 5
CALIFORNIA RESOURCES
PETROLEUM CORPORATION
9200 OAKDALE AV FLR 9
CHATSWORTH CA 913116506

220 110 80 00 8
CIG LOGISTICS LLC
209 W 2ND ST BOX 282
FORT WORTH TX 76102

220 110 76 00 7
NAHABEDIAN EXPLORATION
GROUP LLC
420 BRYANT CI STE D
OJAI CA 930234209

220 110 77 00 0 **DUP**
NAHABEDIAN EXPLORATION
GROUP LLC
420 BRYANT CI STE D
OJAI CA 930234209

220 110 55 00 6
PORTER FRED & SAUNDRA FAMILY
TRUST
1200 21ST ST
BAKERSFIELD CA 93301

220 110 85 00 3
PORTER FRED W II IRA
1200 21ST ST
BAKERSFIELD CA 933014606

220 110 86 00 6 **DUP**
PORTER FRED W II IRA
1200 21ST ST
BAKERSFIELD CA 933014606

220 110 70 00 9
SOUTH KERN INDUSTRIAL CENTER
INC
435 WILLIAMS CT STE 100
MIDDLE RIVER MD 212202881

220 110 64 00 2
AERA ENERGY LLC
P O BOX 11164
BAKERSFIELD CA 933891164

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Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2018101060

Project Title: South Kern Compost Manufacturing Facility by South Kern Industrial Center, LLC
Lead Agency: Kern County Planning Department **Contact Person:** Johnathan Jensen
Mailing Address: 2700 "M" Street Suite 100 **Phone:** (661) 862-8638
City: Bakersfield **Zip:** 93301-2323 **County:** Kern

Project Location: County: Kern City/Nearest Community: City of Taft/Community of San Emidio
Cross Streets: Santiago Road and South Lake Road Zip Code: 93311
Lat. / Long.: 35° 7'56.424" N / 119° 14'22.308" W Total Acres: 155.21
Assessor's Parcel No.: 220-110-70 Section: 24 Twp.: 32S Range: 25E Base: MDB&M
Within 2 Miles: _____ State Hwy #: SR 166 Waterways: N/A
Airports: N/A Railways: San Joaquin Valley Schools: N/A

Document Type:

CEQA: NOP Draft EIR NEPA: NOI Other: Joint Document
 Early Cons Supplement/Subsequent EIR EA Final Document
 Neg Dec (Prior SCH No.) _____ Draft EIS Other _____
 Mit Neg Dec Other _____ FONSI

Local Action Type:

General Plan Update Specific Plan Rezone Annexation
 General Plan Amendment Master Plan Prezone Redevelopment
 General Plan Element Planned Unit Development Use Permit Coastal Permit
 Community Plan Site Plan Land Division (Subdivision, etc.) Other _____

Development Type:

Residential: Units _____ Acres _____ Water Facilities: Type _____ MGD _____
 Office: Sq.ft. _____ Acres _____ Employees _____ Transportation: Type _____
 Commercial: Sq.ft. _____ Acres _____ Employees _____ Mining: Mineral _____
 Industrial: Sq.ft. _____ Acres _____ Employees _____ Power: Type _____ MW _____
 Educational _____ Waste Treatment: Type _____ MGD _____
 Recreational _____ Hazardous Waste: Type _____
 Other: Composting Facility

Project Issues Discussed in Document:

Aesthetic/Visual Fiscal Recreation/Parks Vegetation
 Agricultural Land Flood Plain/Flooding Schools/Universities Water Quality
 Air Quality Forest Land/Fire Hazard Septic Systems Water Supply/Groundwater
 Archeological/Historical Geologic/Seismic Sewer Capacity Wetland/Riparian
 Biological Resources Minerals Soil Erosion/Compaction/Grading Wildlife
 Coastal Zone Noise Solid Waste Growth Inducing
 Drainage/Absorption Population/Housing Balance Toxic/Hazardous Land Use
 Economic/Jobs Public Services/Facilities Traffic/Circulation Cumulative Effects
 Other _____

Present Land Use/Zoning/General Plan Designation:

Composting Facility. Zoning: South Kern Industrial SP; South Kern Industrial Specific Plan: 3.4/2.5 (Solid Waste Facilities).

Project Description: The project proponent is requesting: modifications to CUP No. 2, Map No. 158 which consist of increasing the types of composting feedstocks accepted at the facility, including digestate, in response to Assembly Bill 1826 and Senate Bill 1383 requirements; installing new equipment to be used as part of pre-processing and post-composting operations, including, but not limited to grinders, electrical screens, etc., to improve composting efficiency and capability; increasing all pile heights from 15 feet to 20 feet, including, but not limited to, receiving, mixing, composting, curing, screening, and finished product; and increasing storage time of finished compost product from 7 days to 180 days to accommodate seasonal markets and be consistent with regulatory permitting requirements.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X". If you have already sent your document to the agency please denote that with an "S".

- | | |
|--|---|
| <input checked="" type="checkbox"/> S Air Resources Board | <input type="checkbox"/> Office of Emergency Services |
| <input type="checkbox"/> Boating & Waterways, Department of | <input checked="" type="checkbox"/> S Office of Historic Preservation |
| <input checked="" type="checkbox"/> S California Highway Patrol | <input type="checkbox"/> Office of Public School Construction |
| <input checked="" type="checkbox"/> X CalFire | <input type="checkbox"/> Parks & Recreation |
| <input checked="" type="checkbox"/> S Caltrans District # <u>6 & 9</u> | <input type="checkbox"/> Pesticide Regulation, Department of |
| <input checked="" type="checkbox"/> S Caltrans Division of Aeronautics | <input checked="" type="checkbox"/> S Public Utilities Commission |
| <input type="checkbox"/> Caltrans Planning (Headquarters) | <input checked="" type="checkbox"/> S Regional WQCB # <u>Lahontan</u> |
| <input type="checkbox"/> Central Valley Flood Protection Board | <input type="checkbox"/> Resources Agency |
| <input type="checkbox"/> Coachella Valley Mountains Conservancy | <input type="checkbox"/> S.F. Bay Conservation & Development Commission |
| <input type="checkbox"/> Coastal Commission | <input type="checkbox"/> San Gabriel & Lower L.A. Rivers and Mtns Conservancy |
| <input type="checkbox"/> Colorado River Board | <input type="checkbox"/> San Joaquin River Conservancy |
| <input checked="" type="checkbox"/> S Conservation, Department of | <input type="checkbox"/> Santa Monica Mountains Conservancy |
| <input type="checkbox"/> Corrections, Department of | <input type="checkbox"/> State Lands Commission |
| <input type="checkbox"/> Delta Protection Commission | <input type="checkbox"/> SWRCB: Clean Water Grants |
| <input type="checkbox"/> Education, Department of | <input type="checkbox"/> SWRCB: Water Quality |
| <input checked="" type="checkbox"/> S Energy Commission | <input type="checkbox"/> SWRCB: Water Rights |
| <input checked="" type="checkbox"/> S Fish & Game Region # _____ | <input type="checkbox"/> Tahoe Regional Planning Agency |
| <input type="checkbox"/> Food & Agriculture, Department of | <input checked="" type="checkbox"/> X Toxic Substances Control, Department of |
| <input type="checkbox"/> General Services, Department of | <input type="checkbox"/> Water Resources, Department of |
| <input type="checkbox"/> Health Services, Department of | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Housing & Community Development | <input type="checkbox"/> Other _____ |
| <input checked="" type="checkbox"/> S Integrated Waste Management Board | |
| <input checked="" type="checkbox"/> X Native American Heritage Commission | |

Local Public Review Period (to be filled in by lead agency)

Starting Date October 7, 2021 Ending Date November 22, 2021

Lead Agency (Complete if applicable):

Consulting Firm: _____	Applicant: _____
Address: _____	Address: _____
City/State/Zip: _____	City/State/Zip: _____
Contact: _____	Phone _____
Phone: _____	

Signature of Lead Agency Representative: _____ **Date:** 10/7/2021
 Johnathan Jensen, Planner II

Draft Environmental Impact Report

SCH# 2018101060

*Volume 1
Chapters 1 through 11*

SYNAGRO SOUTH KERN COMPOSTING MANUFACTURING FACILITY PROJECT
By Synagro Technical Inc.

Precise Development Plan No. 2 Mod, Map 158



Kern County Planning and Natural Resources Department
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2370
(661) 862-8600

Technical Assistance by:
Kimley-Horn and Associates
555 Capitol Mall, Suite 300
Sacramento, CA 95814
(916) 858-5800

October 2021

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Chapter 1

Executive Summary

1.1 Introduction

The Synagro South Kern County Composting Manufacturing Facility Project (proposed project) proposes is located on Assessor Parcel Number (APN) 220-110-70 at 2653 Santiago Road and is entirely within Section 24, Township 32 South, Range 25 East, in the Mount Diablo Base and Meridian (Sec 24, T32S, R25E, M. D. B. & M.).

Adoption of the proposed project would enable the expansion of feedstocks that could be accepted at and composted at the facility. The proposed project has been in operation since 2006. The project proposes a Modification to the existing Conditional Use Permit (CUP) No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) under which South Kern Industrial Center, LLC (Project Proponent) operates the South Kern Compost Manufacturing Facility (Facility). The proposed CUP modifications are in response to recent changes in State of California Legislation that requires diversion of 50% of all organics from landfills by 2020 and 75% by 2025, and would not go into effect until after the County's approval of the modified CUP. In addition, CalRecycle and the State Water Resources Control Board have updated the definition of "food material" to include both pre-consumer and post-consumer food waste streams. The proposed modification to the CUP would allow the facility to receive and manage the newly defined types of organic waste streams for composting, as required by CalRecycle. In response to the above, and to better serve end users, the Project Proponent is proposing changes to the composting and curing parameters used at the site to accommodate additional organic waste streams and meet the demands of the agricultural and horticultural markets that purchase the finished compost

1.2 Project Summary

The CUP Modification does not propose to change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre compost facility permitted under the existing CUP. Approval of the proposed CUP modifications may require alterations the above Existing Permits. The Project Proponent is currently working with the respective agencies to coordinate any necessary Permit modifications with this CUP Modification. The proposed modifications to the CUP are as follows:

- Increase the types of composting feedstocks accepted at the facility, including digestate, in response to Assembly Bill 1826 and Senate Bill 1383 requirements;
- Install new equipment to be used as part of pre-processing and post-composting operations, including, but not limited to grinders, electrical screens, etc. to improve composting efficiency and capability;
- Increase all pile heights from 16 feet to 20 feet including, but not limited to, receiving, mixing, composting, curing, screening, and finished product; and
- Increase storage time of finished compost product from 7 days to 180 days to accommodate seasonal markets and be consistent with regulatory permitting requirements.

This Draft Environmental Impact Report (EIR) has been prepared by Kern County as the Lead Agency under the California Environmental Quality Act (CEQA). This Draft EIR provides

information about the environmental setting and impacts of the project and alternatives. It informs the public about the proposed project and its impacts and provides information to meet the needs of local, state, and federal permitting agencies that may be required to consider the proposed project. The EIR will be used by Kern County to determine whether to grant the necessary approvals for the proposed project.

This Executive Summary summarizes the requirements of the CEQA Statute and Guidelines; provides an overview of the project and alternatives; identifies the purpose of this EIR; outlines the potential impacts of the project and the recommended mitigation measures; and discloses areas of controversy and issues to be resolved.

Proposed Actions and Approvals

Development of the project requires several approvals and Kern County as lead agency for the proposed project and has discretionary authority over the primary project proposal. To implement this project, the Project Proponent would need to obtain, at a minimum, the permits/approvals listed below. Additionally, the EIR, once certified, will be used to satisfy the CEQA requirements for the following approvals:

Local

- Kern County
 - Consideration and Certification of the Final EIR
 - Adoption of 15091 and 15093 Findings of Overriding Consideration (if required)
 - Adoption of Mitigation Monitoring Program
 - Approval of Grading Permits (when required)
 - Approval of Building Permits (when required)
- Kern County Environmental Health Services Department, acting as the Local Enforcement Agency (LEA) for CalRecycle
 - Approval of modification to Solid Waste Facilities Permit
 - Approval of modification to Odor Impact Minimization Plan
 - Approval of modification to Report of Compost Site Information (RCSI)
- Kern County Public Works – Building and Development – Flood Plain & Survey
 - Approval of Grading and Building Plans (when required)
- Kern County Public Health Services, Environmental Health Division, Certified Unified Program Agency (CUPA)
 - Approval of updated Hazardous Materials Business Plan
 - Approval of updated Spill Prevention Control and Countermeasure Plan
 - Safety Management Procedures
- Kern County Fire Department
 - Approval of modification to Fire Safety Plan (as required)

Regional

- Central Valley Regional Water Quality Control Board (Central Valley RWQCB)
 - Approval of modification to Waste Discharge Requirements
- San Joaquin Valley Air Pollution Control District (SJVAPCD)

- Authority to Construct for changes in process
- Permit to Operate for new Feedstocks
- Approval of modification to Fugitive Dust Control Plan

State

- California Department of Resources, Recycling and Recovery (CalRecycle)
 - Approval of modification to Odor Impact Minimization Plan
 - Approval of modification to Solid Waste Facility Permit

1.3 Purpose and Use of the Draft EIR

An EIR is a public informational document used in the planning and decision-making process. This EIR will analyze the environmental impacts of the project. The Kern County Planning Commission and Board of Supervisors will consider the information in the EIR, including the public comments and staff response to those comments, during the public hearing process. The final decision is made by the Planning Commission, who may approve, conditionally approve, or deny the project. The action by the Planning Commission is appealable to the Board of Supervisors. The purpose of an EIR is to identify:

- The significant potential impacts of the proposed project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated;
- Any unavoidable adverse impacts that cannot be mitigated; and
- Reasonable and feasible alternatives to the proposed project that would eliminate any significant adverse environmental impacts or reduce the impacts to less than significant.

An EIR also discloses growth-inducing impacts; impacts found not to be significant; and significant cumulative impacts of the proposed project when taken into consideration with past, present, and reasonably anticipated future projects.

CEQA requires that an EIR reflect the independent judgment of the lead agency regarding the impacts, the level of significance of the impacts both before and after mitigation, and mitigation measures proposed to reduce the impacts. A Draft EIR is circulated to responsible agencies, trustee agencies with resources affected by the proposed project, and interested agencies and individuals. The purposes of public and agency review of a Draft EIR include sharing expertise, disclosing agency analyses, checking for accuracy, detecting omissions, discovering public concerns, and soliciting mitigation measures and alternatives capable of avoiding or reducing the significant effects of the proposed project, while still attaining most of the basic objectives of the proposed project.

This Draft EIR is being distributed directly to agencies, organizations, and interested groups and persons for comment during a 45-day formal review period in accordance with Section 15087 of the CEQA Guidelines. The EIR process, including means by which members of the public can comment on the EIR, is discussed further in **Chapter 2, Introduction**, of this Draft EIR.

1.4 Project Overview

This section describes the regional setting, project site and surrounding land uses, objectives, project site conditions and characteristics of the project. The project is described in further detail in **Chapter 3, Project Description**, of this Draft EIR.

Regional Setting

The proposed project site is located in the Valley Region in the western portion of unincorporated Kern County, California, and is outside the sphere of influence (SOI) of any cities. Kern County is California's third largest county in land area and encompasses approximately 8,202 square miles (greater than five million acres). The County has a total population of approximately 917,553 (California Department of Finance [DOF], 2020).

The County's geography includes mountainous areas, agricultural lands and deserts and is divided into three general, but diverse, geographical regions including the Valley Region, the Mountain Region, and the Desert Region. The dominant land uses within the County are agriculture, petroleum exploration and extraction, and alternative energy (such as wind and solar energy) production. Additionally, over the last few decades, urban development has occurred in and around the County's 11 incorporated cities. The City of Bakersfield is located approximately 18 miles northeast of the proposed project and is the County's largest city with a population of approximately 392,756 people (DOF, 2020). The City of Taft is located approximately 7 miles to the west and is the closest city to the proposed project site, approximately 12 miles west. Taft has a population of approximately 8,680, a decline of 737 since 2019 people (DOF, 2020). The project site is approximately 27 miles east of the San Luis Obispo County line and approximately 34 miles north of the Ventura County Line. It is approximately 8 miles northeast of the unincorporated community of San Emidio, approximately 15 miles northwest of the unincorporated community of Lakeview, and approximately 20 miles southeast of the unincorporated communities of Dustin Acres and Valley Acres.

Project Site and Surrounding Land Uses

The project site is bound by Santiago Road to the north and solar sites to the east, west, and south. Access to the project site access is from Santiago Road, which is connected to Interstate 5 (I-5) approximately 7 miles to the west via South Lake Road and Millux Road. The entrance to the project site is located on Santiago Road which intersects with South Lake Road approximately 0.25 miles to the west, at the San Joaquin Valley Railroad crossing. There is a petroleum distribution site across Santiago Road to the north and the majority of additional surrounding land is developed and/or used for agriculture.

The nearest residence to the project site is approximately 1.5 miles to the north of the Facility. There also is a mobile home residence permitted for use by the caretaker/operator of a catfish farm approximately 1.5 miles northeast of the project site. The nearest community, San Emidio, is approximately 8 miles to the northwest of the existing Facility.

The remainder of the surrounding areas are sparsely developed with the vast majority of land being vacant or under agricultural production. The agricultural uses consist predominantly of cotton and alfalfa to the north and irrigated row crops to the south. The California Aqueduct is approximately 3.5 miles to the south and provides water for agricultural needs, as well as for the communities and cities south of the project area. **Table 1-1, *Project Site and Surrounding Land Uses***, shows these uses. The composting facility ("Composting Facility" or "Facility") currently occupies 44 acres of an overall 100-acre project area that is located within a 155-acre parcel. The proposed amendment to the CUP only would apply to the composting site. Overall, the project site and immediately surrounding area is heavily disturbed.

Table 1-1: Project Site and Surrounding Uses

		Existing Land Use Designations		Existing Zoning		
<i>Existing Land Use</i>	<i>Map Code Designations within SKICSP (General Plan Map Code 4.1 – Accepted County Plan)</i>	<i>Map Code Designations immediately adjacent, but outside of the SKICSP</i>	<i>Classifications within SKICSP</i>	<i>Classifications immediately adjacent, but outside of the SKICSP</i>		
Project Site	Developed with compost Facility and vacant land	3.4/2.5 (Solid Waste Facilities/Flood Hazard)	Not Applicable	South Kern Industrial Specific Plan (SP)	Not Applicable	
North	Oil refinery	7.3/2.5 (Heavy Industrial/Flood Hazard)	8.3/2.5 (Extensive Agriculture/Flood Hazard)	South Kern Industrial Specific Plan (SP)	M-3 PD FPS (Heavy Industrial Precise Development Floodplain Secondary Combining District)	
		3.3/2.5 (Other Facilities/Flood Hazard)	8.1 (Intensive Agriculture)	M-3 PD FPS - Heavy Industrial Precise Development Floodplain	A - Exclusive Agriculture	
		8.4/2.5 (Mineral and Petroleum/Flood Hazard)	8.1/2.5 (Intensive Agriculture/Flood Hazard)	Secondary Combining District	A FPS - Exclusive Agriculture Floodplain Secondary Combining District	
		8.1/2.3 (Intensive Agriculture/Shallow Groundwater)	7.3/2.5 (Heavy Industrial/Flood Hazard)			
South	Solar facility	7.3 (Heavy Industrial); 2.5 (Flood Hazard)	8.1/2.5 (Intensive Agriculture/Flood Hazard)	South Kern Industrial Specific Plan (SP)	South Kern Industrial Specific Plan (SP)	
East	Solar facility	7.3 (Heavy Industrial); 2.5 (Flood Hazard)	8.1/2.5 (Intensive Agriculture/Flood Hazard)	A - Exclusive Agriculture	A - Exclusive Agriculture	
			8.3/2.5 (Extensive Agriculture/Flood Hazard)	South Kern Industrial Specific Plan (SP)	South Kern Industrial Specific Plan (SP)	
West	Solar facility	7.3 (Heavy Industrial); 2.5 (Flood Hazard);	8.1/2.5 (Intensive Agriculture/Flood Hazard)	A - Exclusive Agriculture	A - Exclusive Agriculture	
			8.5/2.5 (Resource Management/ Flood Hazard)	South Kern Industrial Specific Plan (SP)	South Kern Industrial Specific Plan (SP)	
			8.3/2.5 (Extensive Agriculture/Flood Hazard)	A- Exclusive Agriculture	A- Exclusive Agriculture	

Within the Composting Facility there are conveyors, lifts, machinery, and vehicles used transport compost, and materials to be composted. These existing composting piles are comprised of open air, loosely stacked biosolids mixed with bulking materials that are composted using a covered aerated static pile composting system (“CASP”) to produce Class A compost (i.e., compost that is essentially free of pathogens prior to land application [CalRecycle, 2018]). The northerly portion of the Facility contains five structures, a parking lot, and an approximate 2.5-acre stormwater/process water pond

The Project Site is located within Flood Zones A as designated by the Flood Insurance Rate Map (FIRM) (06029C2700E) as issued by the Federal Emergency Management Agency (FEMA) on September 26, 2008. Flood Zone A is a Special Flood Hazard Area and is listed as without base flood elevation (BFE) (FEMA, 2008). There are no identified state-designated Alquist-Priolo Earthquake Fault Zones on the project site. The nearest active faults that have had movement in the last 150 years include the San Andreas Fault approximately 16 miles to the southwest and the White Wolf Fault approximately 16 miles to the southeast. The Garlock Fault and Big Pine Faults have also experienced movement in the last 150 years and are located approximately 25 miles to the southeast and south, respectively (USGS, 2018)].

The Facility is served by the Kern County Sheriff’s Office for law enforcement and public safety. The closest sheriff substation is located approximately 13 miles northwest of the project site, at 315 North Lincoln Street in Taft. The Kern County Fire Department (KCFD) provides fire protection and emergency medical and rescue services for the project area. The closest KCFD fire station is Station 21, located approximately 13 miles northwest of the project site at 303 10th Street in Taft.

Project Objectives

CEQA requires a statement of project objectives (Section 15124 of the CEQA Guidelines). The proposed project would expand and continue use of a compost facility, which would assist the State of California in complying with the California’s Mandatory Commercial Recycling Law, approved by the Office of Administrative Law on May 7, 2012 under Assembly Bill (AB) 341, which directs CalRecycle to increase statewide diversion of solid waste to 75 percent by 2020, AB 1826, which requires public agencies and businesses that generate designated quantities of food waste to segregate and arrange for appropriate processing (e.g., composting) of such discarded food materials to further reduce landfilling of such organic materials. The following are the objectives of the proposed project: The proposed project has the following objectives as stated by the project proponent:

- Assist in obtaining the State’s targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025 per SB 1383;
- Continue to operate a state-of the art regional composting facility to meet the organic waste diversion requirements enacted by recent California legislation (AB 32, AB 1826, SB 1383, etc.) to reduce volatile organic compound and greenhouse gas emissions through the diversion of organic material that would otherwise be disposed of in a landfill;
- Accommodate the growing market demand for “Organic” compost by targeting agricultural material, food material, vegetative food material, manure, and other compostable, organic, and recyclable materials to produce high quality compost for the agricultural community and customers;
- Utilize existing infrastructure for composting operations to preserve prime farmland, minimize environmental impact, and provide continued economic benefits to Kern County through

- employment of local residents including compliance with SB 1383 recycling goals;
- Provide ongoing composting activities in compliance with San Joaquin Valley Air Pollution Control District and Regional Water Quality Control Board rules and regulations; and
 - Manufacture high quality compost for use in sustainable agriculture practices to create water saving opportunities and enhancement of agricultural soils.

Project Site Conditions

Existing/Permitted Operations

The composting facility includes perimeter fencing with a gated entrance, scale(s), internal access roads, maintenance area including onsite truck wash area, administration building space, receiving building/ mixing equipment area, compost additive temporary storage area and finished product area. As discussed above, the project site occupies 44 acres of an overall 100-acre project area that is located within a 155-acre parcel. Operations occur 24 hours per day, 7 days per week and employees are onsite 24 hours per day. There are currently 14 employees working at the Facility including truck drivers who are needed to deliver materials. Employee numbers may vary seasonally or change due to business needs and are expected to grow to 60 employees at full operation.

The composting facility is currently permitted to receive a maximum of 354 average daily trips (ADTs) made by vehicles entering and leaving the project site. The proposed project would not change the annual 670,000-ton capacity of the facility but the CUP would allow for the site to receive new biosolid feedstocks. As a result, the maximum ADTs would not change as a result of modifications to the CUP.

Trucks bringing in materials are controlled to ensure that vehicle traffic into, on, and out of the site minimizes interference and safety issues for individuals in vehicles and on-site, and for traffic on Santiago Road. Trucks used to haul materials are over the road (“OTR”) trucks with either end-dump, live floor or walking floor trailers with a 25- to 100-cubic yard (“cy”) capacity to transport operational materials.

Biosolids, food material, organics, and bulking agents’ green material (collectively the “feedstocks”, are unloaded from the delivery trucks into their respective location at the Facility. Biosolids are unloaded in the biosolids receiving building, pre-consumer food waste and bulking agents are unloaded at the amendment storage area. The feedstocks are loaded into mixers at a 1:1 ratio of bulking agents to biosolids/pre-consumer food waste and blended (“Blended Material”).

The Facility uses a CASP system which uses piles to compost a mixture of biosolids, pre-consumer food waste and bulking agents. In the CASP system, air is drawn or pushed through the pile using low pressure-high volume blowers and a piping system which allows for capture and or/conveyance of process air to the odor control device. Both odors and VOC’s emissions are controlled by either a finish compost layer covering the pile or a biofilter.

The CASP system used is specifically designed to positively aerate the bed, which enhances the speed of composting, while providing VOC, greenhouse gas and odor controls. The CASP system is modular and can process not only the existing biosolids feedstock; but, also the proposed food waste and green waste feedstocks. The existing CASP system provides process airflow to control and maintain uniform biomass temperatures and all process air exhausts through a biofilter. All components in contact with the corrosive airstream of the compost are either stainless steel or polymeric materials. The CASP system is designed to conserve energy with variable speed fans, and

adaptive control strategies. Manually operated dampers control airflow and direction to each pile/zone. The CUP Modification would not result in changes to the existing CASP system.

The blended material would be staged on a feedstock pad and transported by front-end loader and/or dump trucks to the Primary CASP Staging Area which consists of the Primary CASP Staging Area and the Primary CASP Zones. The Primary CASP Staging Area and Primary CASP Zones are separated by two 15-foot haul roads on either side of the Primary CASP Staging Area. The blended materials may be placed in the Primary CASP Staging Area for temporary storage or may be placed in piles directly into the Primary CASP Zones. In the event that the mixed materials are placed in the Primary CASP Staging Area for more than 72 hours, a minimum 12-inch layer of finished compost is added to the staged piles in order to minimize odor potential.

Once the piles are formed, they remain stationary until the primary composting process is complete (about 20 days). Each compost pile currently may reach a maximum permitted height of 15 feet and has an approximately 12-inch thick (maximum) underlying base of coarse additive (also known as the air plenum layer) underneath. While the compost sits in piles during the primary composting process, the aeration system supplies air under the piles to provide the aerobic conditions required for the compost process. The aeration system also assists with the control of odors and reduces the potential for anaerobic conditions that can increase production of odors. This aeration process increases the oxygen in the compost piles, which helps in the reduction of odors and vector attractants, reduces fugitive dust, and requires shorter processing than other composting methods.

Emissions created during the composting process also are controlled within the approximately 18-24-inch thick biofilter cover caps on top of the compost piles in the CASP zone. Temperature control of the composting piles is achieved by daily measurements, a feedback control system, or by varying the time period of aeration. Once the proper time and temperature and pathogen and vector attraction reduction requirements are met pursuant to 40 CFR part 503 – Standards for the Use or Disposal of Sewage Sludge requires all sewage sludge materials to meet standards in accordance with the Clean Water Act (CWA) for pollutant limits and establishes reporting requirements and to which the preparer of the sewage sludge must adhere, then the primary composting process is deemed complete.

The final compost product is marketed to agricultural producers and to accommodate the seasonal fluctuations in the compost market and crop rotation. Because the Project Proponent markets greater than 1,000 cubic yards of compost annually, the composts are tested for metal content, pathogens, and nitrogen in accordance with state and federal regulations before distribution. The proposed project would allow the storage of finished compost for up to 180 days following completion of composting as allowed by the existing RWQCB permit.

Approved Operations

The Facility was originally approved by the Kern County Board of Supervisors and has been in operation since 2006 under Conditional Use Permit (CUP) No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421). The proposed project is a request to modify the existing CUP necessary to allow the South Kern Compost Manufacturing Facility (Facility) to receive and manage newly defined types of organic waste streams for composting, as required by CalRecycle.

Existing Permitted Capacity

The Facility is currently permitted to receive a maximum of 354 average daily trips (ADTs) made by vehicles entering and leaving the project site. The Facility is permitted to receive and process a total of 670,000 wet tons of material per year (wtpy), currently comprised of up to 400,000 wtpy of

biosolids and pre-consumer food waste and up to 270,000 wtpy of wood chips and agricultural waste products (i.e., pistachio and almond hulls, cotton gin waste, stable bedding, and screened green waste).

Project Characteristics

The CUP Modification does not propose to change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre compost facility permitted under the existing CUP. Approval of the proposed CUP modifications may require alterations to the above Existing Permits. The Project Proponent is currently working with the respective agencies to coordinate any necessary Permit modifications with this CUP Modification. The proposed modifications to the CUP are as follows:

- Increase the types of composting feedstocks accepted at the facility, including digestate, in response to Assembly Bill 1826 and Senate Bill 1383 requirements.
- Install new equipment to be used as part of pre-processing and post-composting operations, including, but not limited to grinders, electrical screens, etc. to improve composting efficiency and capability;
- Increase all pile heights from 15 feet to 20 feet including, but not limited to, receiving, mixing, composting, curing, screening, and finished product; and
- Increase storage time of finished compost product from 7 days to 180 days to accommodate seasonal markets and be consistent with regulatory permitting requirements.

Environmental Impacts

Section 15128 of the State CEQA Guidelines requires that an EIR contain a statement briefly indicating the reasons why any new and possibly significant effects of a project were determined not to be significant and were, therefore, not discussed in detail in the EIR. The County has engaged the public to participate in the scoping of the environmental document. The contents of this Draft EIR were established based on a Notice of Preparation/Initial Study (NOP/IS) prepared in accordance with the State CEQA Guidelines, as well as public and agency input that was received during the scoping process. The comments to the NOP/IS are found in Appendix A of this Draft EIR. Those specific issues that are found to have no impact or less-than significant impacts during preparation of the NOP/IS do not need to be addressed further in this Draft EIR.

Based on the findings of the NOP/IS and the results of scoping, a determination was made that this Draft EIR must contain a comprehensive analysis of all environmental issues identified in Appendix G of the State CEQA Guidelines except aesthetics, agriculture and forestry resources, biological resources, mineral resources, population and housing, and recreation. While aesthetics, agriculture biological resources, and mineral resources were initially screened out, additional information determined that these issues would warrant additional analysis in the EIR. In addition, due to changes in the CEQA Guidelines, the discussion of impacts associated with potential for the project to be affected by wildfire has been included.

Impacts not Further Considered in this Draft EIR

As discussed in Appendix A of this Draft EIR (Notice of Preparation/Initial Study), and as clarified above, the project was determined to have no impact or less than significant impact on the following environmental resources:

- Agriculture and Forestry Resources
- Population and Housing
- Recreation

Initially, the Agriculture and Forest Resources impact was removed from consideration, however Agriculture impacts have since been incorporated into the Draft EIR due to the surrounding agricultural lands adjacent to the SKIC boundary. Forest Resources, however, are not discussed as there are no forest resources on or adjacent to the project site.

The NOP/IS determined that because the existing 100-acre CUP boundary, inclusive of the developed 44-acre composting facility site, is extensively disturbed, is entirely used for composting related activities and support uses, and ultimately, would not expand the site footprint or result in new construction the listed resource areas would not be substantially affected. While implementation of the proposed project would result in a slight increase in employment opportunities at the project site, this would be an incrementally small and insignificant in comparison to the job market within the County as a whole. In addition, the proposed project would not alter the location, distribution, density or growth rate beyond that projected in the KCGP Housing element. Accordingly, the proposed project also would not result in a substantial increase in demand for additional housing, implement a use that would significantly reduce the ability of the County to meet housing objectives. No construction of housing is proposed, the project is not located in a populated area, or an area with known mineral resources, nor would it affect existing recreational resources or result in a substantial increased demand such that new resources would be required. Thus, no further analysis related to these resources areas is required to be included or warranted in the Draft EIR.

Based on the findings in the NOP/IS, and the discussion above, it was determined that the Draft EIR would include a discussion of the following potentially significant environmental resources:

- Aesthetics
- Agriculture
- 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
- Public Services
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities
- Wildfire

1.5 Environmental Impacts

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) contain a statement briefly indicating the reasons that various, possible, new significant effects of a project were determined not to be significant, and were therefore not discussed in detail in the EIR. The County has engaged the public to participate in the scoping of the environmental document.

The contents of this Draft EIR were established based on a Notice of Preparation/Initial Study (NOP/IS) prepared in accordance with the CEQA Guidelines, as well as public and agency input that were received during the scoping process. The comments to the NOP/IS are found in Appendix

A of this document. Based on the findings of the NOP and the results of scoping, a determination was made that the EIR did not need to further analyze agriculture and forest resources, mineral resources, or recreation. The EIR must contain a comprehensive analysis of the remaining environmental issues identified in Appendix G of the CEQA Guidelines. It should be noted, the original NOP was based on the CEQA Guidelines prior to revisions in 2018. The County has applied the revised Guidelines to resource areas within this EIR when applicable and to ensure full disclosure of potential environmental effects.

1.5.1 Impacts of the Project

Less-than- Significant Impacts (Including Significant Impacts that can be Mitigated, Avoided, or Substantially Lessened)

Table 1-2, Summary of Proposed Project Impacts That Are less than Significant or Less than Significant With Mitigation, presents those impacts of the project that were determined to be less than significant, or less than significant with implementation of mitigation measures. Less than significant cumulative impacts are also included in this table. **Sections 4.1 through 4.18** of this Draft EIR present detailed analysis of these impacts and describe the means by which the mitigation measures listed in **Table 1-5, Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation**, further below, that would reduce impacts to a less-than-significant level

Project Level Significant and Unavoidable Impacts

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts, including those that can be mitigated but not reduced to less than significant levels. Potential environmental effects of the project and proposed mitigation measures are discussed in detail in **Chapter 4** of this Draft EIR. Through the course of the analysis, largely because the proposed project would not result in any additional disturbance outside the existing composting facility and no new construction would occur, only air quality impacts were found to remain significant and unavoidable with mitigation.

Table 1-2: Summary of Proposed Project Impacts That Are less than Significant or Less than Significant With Mitigation

Impact	Mitigation Measures
Aesthetics (Project and Cumulative)	None Required
Biological Resources (Project and Cumulative)	MM 4.3-1 through MM 4.3-11, MM 4.9-2
Cultural Resources (Project and Cumulative)	MM 4.5-1 and MM 4.5-2
Energy (Project and Cumulative)	MM 4.3-5
Geology and Soils (Project and Cumulative)	MM 4.7-1 through MM 4.7-4, MM 4.10-1 & MM 4.10-3
Greenhouse Gas Emissions (Project and Cumulative)	None Required
Hazards and Hazardous Materials (Project and Cumulative)	MM 4.9-1 through 4.9-3
Hydrology and Water Quality (Project and Cumulative)	MM 4.10-1 through 4.10-2, MMs 4.7-1 & MM 4.7-2, MM 4.9-1
Land Use and Planning (Project and Cumulative)	None Required
Mineral Resources	None Required

Table 1-2: Summary of Proposed Project Impacts That Are less than Significant or Less than Significant With Mitigation

Noise (Project and Cumulative)	MM 4.12-1
Public Services (Project and Cumulative)	MM 4.9-1 through MM 4.9-3, MM 4.14-1
Transportation and Traffic (Project and Cumulative)	None Required
Tribal Cultural Resources (Project and Cumulative)	None Required
Utilities (Project and Cumulative)	MM 4.17-1 and 4.17-2
Wildfire (Project and Cumulative)	None Required

Unavoidable Significant Adverse Impacts

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the proposed project and proposed mitigation measures are discussed in detail in **Chapter 4** of this EIR. Project impacts to air quality were determined to be significant and unavoidable with mitigation. The project significant and unavoidable impacts were found to be a result of the uncertainty of the project's regional and localized health impacts associated with criteria air pollutants. With implementation of Mitigation Measures **MM 4.3-1** through **MM 4.3-10**, project impacts remain significant and unavoidable.

1.5.3 Significant Cumulative Impacts

According to Section 15355 of the CEQA Guidelines, the term *cumulative impacts* “refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” Individual effects that may contribute to a cumulative impact may be from a single project or a number of separate projects. Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related or nearby projects, including newly proposed projects, the effects could be cumulatively considerable.

This EIR has considered the potential cumulative effects of the proposed project. Cumulative impacts to air quality were determined to be significant and unavoidable with mitigation as a result of the project. The cumulative significant and unavoidable impacts were found to be a result of the uncertainty of the project's regional and localized health impacts associated with criteria air pollutants. With implementation of Mitigation Measures **MM 4.3-1** through **MM 4.3-10**, cumulative impacts remain significant and unavoidable.

Irreversible Impacts

Section 15126.2(c) of the CEQA Guidelines defines an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of the project. Irreversible impacts can also result from damage caused by environmental accidents associated with a project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified.

Installation of new equipment and machinery would require the commitment of nonrenewable resources during installation and project operations. More specifically, during project operations, oil, gas, and other fossil fuels and nonrenewable resources would be consumed, primarily in the form of transportation fuel needed to transport composting materials and for project employees' trips to and from the site. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of long-term project operations. However, assuming that those commitments occur in

accordance with the adopted goals, policies, and implementation measures of the Kern County General Plan, and as they would be consistent with existing operations, as a matter of public policy, those commitments have been determined to be acceptable. The Kern County General Plan ensures that any irreversible environmental changes associated with those commitments will be minimized.

1.5.4 Growth Inducement

The Kern County General Plan recognizes that certain forms of growth are beneficial, both economically and socially. Section 15126.2(d) of the CEQA Guidelines provides the following guidance on growth inducing impacts:

A project is identified as growth-inducing if it “would foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.

Growth inducement can be a result of new development that requires an increase in employment levels, removes barriers to development, or provides resources that lead to secondary growth. With respect to employment, the project would not induce substantial growth. It is anticipated that the workforce needed to install new machinery and equipment who would commute to the sites each day from local communities. It is anticipated that the majority would likely come from the existing labor pool as construction workers travel from site to site as needed. Operation of the proposed project would result in a total of 60 permanent staff employees for ongoing facility management including truck drivers delivering materials to and from the site.

Additionally, the project would expand an existing composting facility would not induce new growth but instead response to increased market demand. Kern County planning documents already permit and anticipate a certain level of growth in the area of the project and in the State as a whole, along with attendant growth in demand. Therefore, any link between the project and unanticipated and unplanned growth in Kern County would be speculative.

1.6 Overview of Alternatives to the Proposed Project

Section 15126.6 of the CEQA Guidelines states that an EIR must address “a range of reasonable alternatives to the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” The proposed project would not result in any significant impacts after mitigation is applied to the three resource areas: Biological Resources, Hazards and Hazardous Materials, and Hydrology and Water Quality. The project would result in significant and unavoidable impacts after mitigation to Air Quality. The alternatives evaluated are summarized below and discussed in detail in **Chapter 6, Alternatives**.

Alternative 1: No Project Alternative

The CEQA Guidelines require EIRs to include a No Project Alternative for the purpose of allowing decision makers to compare the effects of approving the proposed project versus a No Project Alternative. Accordingly, Alternative 1, the No Project Alternative, assumes that the project site would continue to operate as a compost facility as it has since 2006, and project operations would continue with no authorized expansions or changed operations.

The proposed expansion and addition or modification of the following components would not occur:

- Increase the types of composting feedstocks accepted at the facility, including digestate, in response to Assembly Bill 1826 and Senate Bill 1383 requirements;
- Install new equipment to be used as part of pre-processing and post-composting operations, including, but not limited to grinders, electrical screens, etc. to improve composting efficiency and capability;
- Increase all pile heights from 15 feet to 20 feet including, but not limited to, receiving, mixing, composting, curing, screening, and finished product; and
- Increase storage time of finished compost product from 7 days to 180 days to accommodate seasonal markets and be consistent with regulatory permitting requirements.

Alternative 2: Locally Sourced Feedstocks Alternative

This alternative would limit the source of new feedstocks at the existing compost facility to within Kern County. This alternative would reduce the number and length of trips to the facility to deliver new feed stocks thereby reducing ROG and NOx emissions.

Alternative 3: Limited New Feedstocks Alternative

This alternative would limit new feedstocks at the existing compost facility to pre-consumer food waste from large scale industrial or commercial users such as food processors, packing houses, and grocery stores. Food waste from these users would have limited contamination and packaging material. Food waste from institutional facilities such as schools, restaurants, and prisons would not be accepted at the facility due to the high amount of contamination in the food waste.

This alternative would result in a slight decrease in truck trips, using only large volume trucks not smaller vehicles. Fewer truck trips would also result in an incremental reduction in ROG and NOx emissions. The acceptance of only pre-consumer food waste would decrease the sorting and processing to remove plastics and other non-compostable materials that require disposal at County landfills.

1.6.2 Alternatives Considered and Rejected

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects (CEQA Guidelines, Section 15126.6[c]). Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered (CEQA Guidelines, Section 15126[f][2]). Kern County considered alternatives to further reduce impacts to, biological resources, hazards and hazardous materials, and hydrology and water quality. Per CEQA, the lead agency may make an initial determination as to which alternatives are feasible and warrant further consideration, and which are infeasible. The following alternatives were initially considered but were eliminated from further consideration in this EIR because the proposed project would not result in significant impacts to these resource areas or any others after mitigation is applied. Additionally, alternatives screened from detailed consideration would not meet project objectives and/or were infeasible and are listed below:

- Reduced Project Alternative
- Alternative Site Alternative

Alternatives are described in detail in **Chapter 6, Alternatives**, of this Draft EIR. **Table 1.3, Summary of Development Alternatives** below, provides an overview of the project improvements that would occur under the proposed project versus the No Project Alternative.

Table 1.3. Summary of Development Alternatives

Alternative	Description	Basis for Selection and Summary of Analysis
Proposed Project	<ul style="list-style-type: none"> Assist in obtaining the State’s targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025 per SB 1383; Continue to operate a state-of-the art regional composting facility to meet the organic waste diversion requirements enacted by recent California legislation (AB 32, AB 1826, SB 1383, etc.) to reduce volatile organic compound and greenhouse gas emissions through the diversion of organic material that would otherwise be disposed of in a landfill; Accommodate the growing market demand for “Organic” compost by targeting agricultural material, food material, vegetative food material, manure, and other compostable, organic, and recyclable materials to produce high quality compost for the agricultural community and customers; Utilize existing infrastructure for composting operations to preserve prime farmland, minimize environmental impact, and provide continued economic benefits to Kern County through employment of local residents including compliance with SB 1383 recycling goals; Provide ongoing composting activities in compliance with San Joaquin Valley Air Pollution Control District and Regional Water Quality Control Board rules and regulations; and Manufacture high quality compost for use in sustainable agriculture practices to create water saving opportunities and enhancement of agricultural soils. 	<ul style="list-style-type: none"> N/A
No Project Alternative	<ul style="list-style-type: none"> Increase the types of composting feedstocks accepted at the facility, including digestate, in response to Assembly Bill 1826 and Senate Bill 1383 requirements; Install new equipment to be used as part of pre-processing and post-composting operations, including, but not limited to grinders, electrical screens, etc. to improve composting efficiency and capability; Increase all pile heights from 16 feet to 20 feet including, but not limited to, receiving, mixing, composting, curing, screening, and finished product; and Increase storage time of finished compost product from 7 days to 180 days to accommodate seasonal markets and be consistent with regulatory permitting requirements. 	<ul style="list-style-type: none"> Required by CEQA. Avoids need for CUP.

Table 1.3. Summary of Development Alternatives

Alternative	Description	Basis for Selection and Summary of Analysis
Locally Sourced Feedstock Alternative	<ul style="list-style-type: none"> Limit the source of new feedstocks to only those generated from within Kern County. 	<ul style="list-style-type: none"> Reduce the number and length of vehicle/truck trips. Reduce ROG and NOx emissions.
Limited New Feedstock Alternative	<ul style="list-style-type: none"> Limit new feedstocks to pre-consumer food waste from large scale industrial or commercial users such as food processors, packing houses, and grocery stores. Do not accept food waste from institutional facilities such as schools, restaurants, and prisons. This alternative would result in a slight decrease in truck trips, using only large volume trucks not smaller vehicles; Reduce the need for on-site processing efforts. 	<ul style="list-style-type: none"> These wastes have limited packaging material and contamination. These sources have higher amounts of contaminants. Slightly reduce truck trips and incremental reduction in ROG and NOx emissions. Decrease on-site processing to remove non-compostable materials. Reduce demand for off-site disposal of non-compostable materials

A comparison of the impacts of the proposed project to the No Project Alternative is provided in **Table 1-4, Comparison of Alternatives**, below.

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Table 1-4. Comparison of Alternatives

Environmental Resource	Proposed Project	Alternative 1: No Project Alternative	Alternative 2: Locally Sourced Feedstocks Alternative	Alternative 3: Limited New Feedstocks Alternative
Aesthetics	Less than significant	Less	Similar	Similar
Agricultural Resources		Less	Similar	Similar
Air Quality	Less than significant	Similar	Similar	Less
Biological Resources	Less than significant with mitigation	Less	Less	Similar
Cultural Resources	Less than significant	Similar	Similar	Similar
Energy	Less than significant	Less	Less	Less
Geology and Soils	Less than significant	Similar	Similar	Similar
Greenhouse Gas Emissions	Less than significant	Less	Similar	Less
Hazards and Hazardous Materials	Less than significant with mitigation	Similar	Similar	Similar
Hydrology and Water Quality	Less than significant with mitigation	Less	Similar	Similar
Land Use and Planning	Less than significant	Similar	Similar	Similar
Mineral Resources	Less than significant	Similar	Similar	Similar
Noise	Less than significant	Less	Less	Similar
Public Services	Less than significant	Less	Similar	Similar
Traffic and Transportation	Less than significant	Less	Less	Less
Tribal Cultural Resources	Less than significant	Similar	Similar	Similar
Utilities and Service Systems	Less than significant	Less	Similar	Similar
Wildfire	Less than Significant	Similar	Similar	Similar
Meet Project Objectives?	Yes	No	Some	Some
Reduce Significant and Unavoidable Impacts?	No Significant and Unavoidable Impacts	Similar	Similar	Similar

Reduced Project Alternative

A Reduced Project Alternative would reduce the proposed additions and modifications to the facility boundaries under the CUP. However, given the limited area for project operations, this alternative was determined to be infeasible in relation to meeting the majority of project objectives.

Alternative Site

This alternative would involve the development of the proposed project on another site located within Kern County. Although undetermined at this time, the alternative project site would likely remain in the San Joaquin Valley region of the County, similar to the proposed project. CEQA Guidelines 15126.6(f)(2)(a) states that the key and initial step in considering an alternative site Alternative is whether “any of the significant effects of the project would be avoided or substantially lessened” in relocating the project, while remaining consistent with the same basic objectives of the proposed project. The availability of alternative sites is constrained by the agricultural use of the surrounding area. While other sites with similar size, configuration, and use history may exist in San Joaquin Valley, use of these sites would mean displacement of existing agricultural uses, which would create greater environmental impacts. In addition, alternative sites for the project are not considered to be “potentially feasible,” as there are no suitable sites within the control of the project Applicant that would reduce project impacts. There are no alternative sites within the Applicant’s control where project development would result in fewer project impacts. Given the size of the proposed project and the project objectives, this alternative was eliminated because it would not avoid or substantially reduce the significant environmental effects of the proposed project.

1.6.3 Environmentally Superior Alternative

As presented in the comparative analysis above, and as shown in **Table 1-4**, there are a number of factors in selecting the environmentally superior alternative. An EIR must identify the environmentally superior alternative to the project. Alternative 1, the No Project Alternative, would be environmentally superior to the project on the basis of its minimization or avoidance of physical environmental impacts.

However, CEQA Guidelines Section 15126.6(e)(2) states:

The “no project” analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

The Environmentally Superior Alternative is thus considered to be Alternative 1, the No Project Alternative. This Alternative would have a similar impacts or incrementally smaller impacts to the majority of the less than significant impacts that would occur under the proposed project. While the existing project with expanded feedstocks under the proposed project would require mitigation to reduce impacts to biological resources, hazardous materials, and hydrology and water quality, these impacts, as well as all other project related impacts would be less than significant. Therefore, the environmentally superior alternative would not result in a substantial reduction of any impacts, and

because no project related impacts are significant and unavoidable, and this benefit and in large part, the purpose of the environmentally superior alternative would not occur.

1.7 Areas of Controversy

Areas of controversy were identified through written agency and public comments received during the circulation of the NOP/IS and comments for the project. A list of the public comments received during the NOP/IS circulation period are provided in **Chapter 2, Introduction, Table 2-1** of this EIR. In summary, the following issues were identified during the circulation of the NOP/IS and comments period and are addressed in the appropriate sections of **Chapter 4**:

- Impacts to air quality;
- Impacts to biological resources;
- Impacts to public services;
- Impacts to transportation and traffic and access; and
- Impacts to utilities

1.8 Issues to be Resolved

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choice among alternatives and whether or how to mitigate significant impacts. The following major issues are to be resolved:

- Determine whether the EIR adequately describes the environmental impacts of the project;
- Choose among alternatives;
- Determine whether the recommended mitigation measures should be adopted or modified; and
- Determine whether additional mitigation measures need to be applied to the project.

1.9 Summary of Environmental Impacts and Mitigation

Table 1-5 summarizes the environmental impacts of the proposed project, mitigation measures, and unavoidable significant impacts identified and analyzed in **Chapter 4** of this Draft EIR. Refer to the appropriate EIR section for additional information.

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Aesthetics			
Impact 4.1-1: The Project Would Substantially Degrade the Existing Visual Character or Quality of the Proposed Project Site and Its Surroundings	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts - The project would not make a substantial contribution, in conjunction with past, present, and reasonably foreseeable projects such that a significant impact to aesthetic resources would occur. Cumulatively, the modifications to the existing CUP (i.e. expanded feedstocks, pile heights, etc.) in response and in conformance with state law, would not result in the project combining with other projects to substantially degrade the existing visual character or quality of the site and its surroundings. The visual environment of the project site is heavily disturbed, and it is surrounded by other industrial uses. Future projects, if they occur, are unlikely to combine with the project and result in cumulatively negative impacts on scenic quality. Thus, cumulative impacts would be less than significant, and mitigation is not required.	Less than significant	No mitigation measures are required.	Less than significant
Agriculture			
Impact 4.2-1: The Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as	Less than significant	No mitigation measures are required.	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use			
Impact 4.2-2 The Project conflict with existing zoning for agricultural use or a Williamson Act Contract	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.2-3: The project would involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.2-4: The Project would result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Section 15206(b)(3) Public Resources Code	No impact	No mitigation measures are required.	No impact
Cumulative Impacts: The proposed project would not make a cumulative contribution to cumulative impacts to agricultural resources. The project site is not located on farmland, is not under a Williamson Act Contract and does not contain any trees that could be used as timber. While there are other past, present, and future projects in the central valley that have or would result in farmland conversion, the proposed project would not make a significant contribution to the overall loss.	Less than significant	No mitigation measures are required.	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Thus, impacts would be less than significant, and mitigation is not required.			
Air Quality			
Impact 4.3-1: The Project Would conflict with or obstruction implementation of applicable air quality plans.	Potentially significant	<p>MM4.3-1The project is required to comply with applicable state and federal air pollution control laws and regulations, and with applicable rules and regulations of the San Joaquin Valley Air Pollution Control District during construction and operations, including obtaining the required permit for the modified facility.</p> <p>MM4.3-2 Prior to issuance of a grading permit, the project proponent shall submit a Fugitive Dust Control Plan to the San Joaquin Valley Air Pollution Control District for review and approval. The Fugitive Dust Control Plan shall reduce PM10 and PM2.5 emissions during construction. The Fugitive Dust Control Plan shall include:</p> <ul style="list-style-type: none"> a. Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submission, and implementation of the plan. b. Description and location of operation(s) c. Listing of all fugitive dust emissions sources including the operation. d. All measures (in addition to those measures required by the San Joaquin Valley Air Pollution Control District) being undertaken during construction activities and operational activities to ensure fugitive dust being blown off-site is minimized. Measures may include but are not limited to. <ul style="list-style-type: none"> 1. Use of water trucks as required for the expected level of winds in the area. 2. Use of dust suppressant (i.e. soil binders or mulch). 3. Construction of dust screening in appropriate locations around the project site (i.e. fence slats of mesh screening). 	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>4. A copy of the approved Site-Specific Dust Control Plan shall be kept at the on-site construction office, and all measures included in the Site-Specific Dust Control Plan shall be included on all Grading Plans issued for the project by the Kern County Public Works Department.</p> <p>MM 4.3-3 The project proponent shall ensure construction of the project shall be conducted in compliance with all applicable rules and regulations set forth by the San Joaquin Valley Air Pollution Control District. Dust control measures outlined below shall be implemented where they are applicable and feasible. The list shall not be considered all-inclusive and any other measures to reduce fugitive dust emissions may be required by appropriate agencies to respond to urgent issues on-site:</p> <p>a. The following dust control measures shall be implemented:</p> <ol style="list-style-type: none"> 1. All soil being actively excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soil areas. Watering shall take place a minimum of three times daily on disturbed soil areas with active operations, unless dust is otherwise controlled by rainfall or use of a dust suppressant. 2. After active construction activities, soil shall be stabilized with a non-toxic soil stabilizer or soil weighting agent, or alternative approved soil-stabilizing methods. 3. All unpaved construction and operation/maintenance site roads, as they are being constructed, shall be stabilized with a non-toxic soil stabilizer or soil weighting agent. 4. All clearing, grading, earth-moving, and excavation activities shall cease during periods of winds greater than 20 mph (averaged over 1 hour), or when dust plumes of 20% or greater opacity impact public roads, occupied structures, 	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>or neighboring property or as identified in a plan approved by the San Joaquin Valley Air Pollution Control District.</p> <ol style="list-style-type: none"> 5. All trucks entering or leaving the site will cover all loads of soils, sands, and other loose materials, or be thoroughly wetted with a minimum freeboard height of 6 inches. 6. Areas disturbed by clearing, earth-moving, or excavation activities shall be minimized at all times. 7. Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust. 8. All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered or shall be treated with appropriate dust suppressant compounds. 9. Prior to construction, wind breaks (such as chain-link fencing including a wind barrier) shall be installed where appropriate. 10. Where acceptable to the Kern County Fire Department, weed control shall be accomplished by mowing instead of disking, thereby, leaving the ground undisturbed and with a mulch covering. 11. The project operator shall use the Global Positioning System (GPS) or lasers to level posts, generally avoiding grading except when elevation changes exceed design requirements. 12. When grading is unavoidable, it is to be phased and done with the application of approved chemical dust palliatives that stabilize the soil. 13. Where ground is cleared, plant roots must be left in place where possible to stabilize the soils. 14. Disturbed areas shall be revegetated as soon as possible after disturbance if area is no longer needed for mining or landfill activities. 	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>b. After active clearing, grading, and earth-moving activities are completed within any portion of the site, the following dust control practices shall be implemented:</p> <ol style="list-style-type: none"> 1. Dust suppressant should be used on the same day or day immediately following the cessation of activity for a particular area where further activity is not planned. 2. All internal unpaved road areas shall be treated with a dust suppressant or graveled to prevent excessive dust. 3. The project operator shall use dust suppression measures during road surface preparation activities, including grading and compaction. 4. Final road surfaces must be stabilized to achieve a measurable threshold friction velocity (TFV) equal to or greater than 100 centimeters per second. 5. Wind barrier fencing or screening shall be installed, when appropriate. <p>c. During all phases of construction, the following vehicular control measures shall be implements.</p> <ol style="list-style-type: none"> 1. On-site vehicle speed shall be limited to 10 mph on unpaved areas within the project site. Vehicles may travel up to 25 mph on stabilized unpaved roads (application of palliatives, gravel, etc. that reduces the erosion potential of the soil) as long as such speeds do not create visible dust emissions. 2. Visible speed limit signs shall be posted at main ingress point(s) on site. 3. All areas with vehicle traffic, such as the main entrance roadway to the project site, shall be graveled or treated with dust palliatives so as to prevent track-out onto public roadways. 4. All vehicles that are used to transport solid bulk material on public roadways and that have potential to cause visible emissions shall be provided with a cover, or the materials shall 	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>be sufficiently wetted and loaded onto the trucks in a manner to provide at least one foot of freeboard.</p> <p>5. Streets adjacent to the project site shall be kept clean, and project-related accumulated silt shall be removed a minimum of once daily, or as necessary to prevent substantial off-site fugitive dust releases. The use of either dry rotary brushes (unless prior wetting) or blower devices is prohibited.</p> <p>6. Access to the site shall be by means of an apron into the project site from adjoining surfaced roadways. The apron shall be surfaced or treated with dust suppressants. If site soils cling to the wheels of the vehicles, then a grizzly, wheel-washer, or other such device shall be used on the road exiting the project site, immediately prior to the pavement, to remove most of the soil material from vehicle tires.</p> <p>MM 4.3-4 Prior to the issuance of grading or building permits, where required, the project proponent shall provide a comprehensive Phased Grading Plan for review by the Kern County Planning and Natural Resources Department to reduce fugitive dust emissions resulting from wind erosion at the site. The Phased Grading Plan shall:</p> <p>a. Identify a comprehensive grading schedule for the entire project site that demonstrates the following:</p> <ol style="list-style-type: none"> 1. The extent of grading shall be minimized to the extent feasible to limit the removal of topsoil and creation of loose soils. Only in areas where drainage improvements, structural foundations (e.g. inverter/ transformer pads), service roads, and leveling of severe grades need to occur will grading that removes and recompacts the soil surface occur. Dust palliatives and water shall be immediately applied following any grading. 2. Application of dust palliatives shall be applied on an as-needed basis throughout project construction to help reduce 	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>dust, especially during periods of high winds, and shall include use of: (1) an eco-safe, biodegradable, liquid copolymer shall be used to stabilize and solidify any soil; and (2) a hydro mulch mixture composed of wood fiber mulch and an Environ-Mend binder may also be applied, where real-time weather conditions dictate that additional measures are necessary.</p> <p>3. Water trucks transit across the project site and construction access roads to suppress the fugitive dust from disturbed soils on roads and active working areas on a regular and as-needed basis.</p> <p>b. Identify, in addition to those measures required by the San Joaquin Valley Air Pollution Control District, all measures being undertaken during construction activities and operational activities to ensure dust being blown off-site is minimized. Measures may include, but are not limited to:</p> <ol style="list-style-type: none"> 1. Increased use of water and/or dust suppressant. 2. Pre-seeding and/or use of wood chips as permitted by the San Joaquin Valley Air Pollution Control District. 3. Construction of dust screening around the project site. <p>MM 4.3-5 The project proponent and/or its contractors shall implement the following measures during construction of the project.</p> <ol style="list-style-type: none"> a. All equipment shall be maintained in accordance with the manufacturer’s specification. b. Construction related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than ten minutes. c. No individual piece of construction equipment shall operate longer than 8 consecutive hours per day. d. Electric equipment shall be used whenever possible in lieu of diesel or gasoline-powered equipment 	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>e. All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NOx. Emissions.</p> <p>f. On-road and off-road diesel equipment shall use diesel particulate filters (or the equivalent) if permitted under manufacturer’s guidelines.</p> <p>g. Prohibit the use of heavy equipment during first- or second-stage smog alerts and suspend all construction activities during second-stage smog alerts.</p> <p>h. Utilize existing power sources (i.e., power poles) when available. This measure would minimize the use of higher polluting gas or diesel generators.</p> <p>i. Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use to the extent feasible.</p> <p>j. Require that trucks and vehicles in loading or unloading queues have their engines turned-off when not in use, where feasible.</p> <p>k. Off-road equipment engines over 50 horsepower shall be Tier 3 certified or higher (unless Tier 3 equipment, has been determined to not be available).</p> <p>l. Provide notification to trucks and vehicles in loading or unloading queues that their engines shall be turned-off when not in use for more than 10 minutes.</p> <p>MM4.3-6 This is an existing Composting Facility that has been permitted and operating since 2006. Prior to issuance of any San Joaquin Valley Air Pollution Control District -required Authorities to Construct or Permits to Operate for the proposed modifications, the project proponent shall confirm that it has previously surrendered sufficient ERCs to reduce VOC emissions in accordance with San Joaquin Valley Air Pollution</p>	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>Control District requirements, and if necessary, purchase additional ERCs for the project.</p> <p>MM4.3-7 The project proponent shall enter into a Developer Mitigation Contract with the San Joaquin Valley Air Pollution Control District to reduce emissions of reactive organic gases, nitrogen oxide, and particulate matter (PM10 and PM2.5) to ensure that all project-related construction and operational emissions within the San Joaquin Valley Air Basin are fully offset (i.e., no net increase). Emission reductions may be achieved by use of newer, low-emission equipment, implementation of on-site or off-site mitigation, and/or the funding of off-site mitigation, through participation in the San Joaquin Valley Air Pollution Control District’s off-site mitigation program.</p> <p>The Developer Mitigation Contract shall be reviewed and approved by the San Joaquin Valley Air Pollution Control District prior to issuance of construction/grading permits by Kern County. The project proponent/owner shall submit to the Kern County Planning and Natural Resources Department documentation confirming compliance with the Developer Mitigation Contract, prior to issuance of final discretionary approval (e.g., approval of the grading permit). The project proponent shall report annually through the Mitigation Monitoring and Reporting program in compliance with the Developer Mitigation Contract.</p>	
Impact 4.3-2: The Project Would Result In A Cumulatively Considerable Net Increase of Any Criteria Pollutant For Which The Project Region Is Nonattainment Under an	Less than significant	No mitigation measures are required.	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Applicable Federal Or State Ambient Air Quality Standard.			
Impact 4.3-3: The Project Would Expose Sensitive Receptors to Substantial Pollutant Concentrations.	Potentially significant	<p>Implement Mitigation Measures MM 4.3-1 through MM 4.3-7 as described above and,</p> <p>MM 4.3-8 At the time of project implementation, a COVID-19 Health and Safety Plan should be prepared in accordance with the Kern County Public Health Services Department and Kern County Health Officer mandates. A copy of the COVID-19 Health and Safety Plan shall be submitted to the Kern County Planning Department for review and approval.</p> <p>MM4.3-9 – Prior to ground disturbance activities, the project proponent shall implement the following Valley Fever Provisions.</p> <p>a. Provide evidence to the Kern County Planning and Natural Resources Department that the project operator and/or construction manager has developed a “Valley Fever Training Handout”, training, and schedule of sessions for education to be provided to all construction personnel. All evidence of the training session materials, handout(s) and schedule shall be submitted to the Kern County Planning and Natural Resources Department within 24 hours of the first training session. Multiple training sessions may be conducted if different work crews will come to the site for different stages of construction; however, all construction personnel shall be provided training prior to beginning work. The training may be administered using video or other electronic media. The evidence submitted to the Kern County Planning and Natural Resources Department regarding the “Valley Fever Training Handout” and Session(s) shall include the following:</p>	Significant and Unavoidable

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<ol style="list-style-type: none"> 1. A sign-in sheet (to include the printed employee names, signature, and date) for all employees who attended the training session. 2. Distribution of a written flier or brochure that includes educational information regarding the health effects of exposure to criteria pollutant emissions and Valley Fever. 3. Training on methods that may help prevent Valley Fever Infection. 4. A demonstration to employees on how to use personal protective equipment, such as respiratory equipment (masks), to reduce exposure to pollutants and facilitate recognition of symptoms and earlier treatment of Valley Fever. Where respirators are required, the equipment shall be readily available and shall be provided to employees for use during work. Proof that the demonstration is included in the training shall be submitted to the county. This proof can be via printed training materials/agenda, DVD, digital media files, photographs. <p>b. The project proponent also shall consult with the Kern County Health Services Department to develop a Valley Fever Dust Management Plan that addresses the potential presence of the Coccidioides spore and mitigates for the potential for Coccidioidomycosis (Valley Fever). Prior to issuance of permits, the project operator shall submit the Plan to the Kern County Public Health Department for review and approval. The Plan shall include a program to evaluate the potential for exposure to Valley Fever from construction activities and to identify appropriate safety procedures that shall be implemented, as needed, to minimize personnel and public exposure to potential Coccidioides spores. Measures in the Plan shall include the following:</p> <ol style="list-style-type: none"> 1. Provide High-Efficiency Particulate Air filters for heavy equipment equipped with factory enclosed cabs capable of 	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>accepting the filters. Require contractors utilizing applicable heavy equipment to furnish proof of worker training on proper use of applicable heavy equipment cabs, such as turning on air conditioning prior to using the equipment.</p> <p>2. Provide communication methods, such as two-way radios, for use in enclosed cabs.</p> <p>3. Require National Institute for Occupational Safety and Health- approved half-face respirators equipped with minimum N-95 protection factor for use during worker collocation with surface disturbance activities, as required per the hazard assessment process.</p> <p>4. Cause employees to be medically evaluated, fit-tested, and properly trained on the use of the respirators, and implement a full respiratory protection program in accordance with the applicable California Occupational Safety and Health Administration Respiratory Protection Standard (8 California Code of Regulations Section 5144).</p> <p>5. Provide separate, clean eating areas with hand-washing facilities.</p> <p>6. Install equipment inspection stations at each construction equipment access/egress point. Examine construction vehicles and equipment for excess soil material and clean, as necessary, before equipment is moved off site.</p> <p>7. Train workers to recognize the symptoms of Valley Fever, and to promptly report suspected symptoms of work-related Valley Fever to a supervisor.</p> <p>8. Work with a medical professional to develop a protocol to medically evaluate employees who develop symptoms of Valley Fever.</p> <p>9. Work with a medical professional, in consultation with the County Health Services Department, to develop an educational</p>	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>handout for on-site workers and surrounding residents within 3 miles of the project site and include the following information on Valley Fever: what are the potential sources/ causes, what are the common symptoms, what are the options or remedies available should someone be experiencing these symptoms, and where testing for exposure is available. Prior to construction permit issuance, this handout shall have been created by the project operator and reviewed by the project operator and reviewed by the County. No less than 30 days prior to any work commencing, this handout shall be mailed to all existing residences within 3 miles of the project boundaries.</p> <p>10. When possible, position workers upwind or crosswind when digging a trench or performing other soil-disturbing tasks.</p> <p>11. Prohibit smoking at the worksite outside of designated smoking areas; designated smoking areas will be equipped with handwashing facilities.</p> <p>12. Post warnings on-site and consider limiting access to visitors, especially those without adequate training and respiratory protection.</p> <p>MM4.3-10 Prior to the issuance of grading permits, a onetime fee shall be paid to the Kern County Public Health Services Department in the amount of \$3,200 for public awareness programs.</p>	
Impact 4.3-4: The Project Would Result In Other Emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Air Quality Impacts – The proposed project would result in emission of criteria pollutants including reactive	Potentially Significant	Implement MM 4.3-1 through MM 4.3-10 .	Significant and Unavoidable

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>organic gases (ROG), nitric oxides (NOx), carbon monoxide (CO), sulphur oxides (SOx), and particulate matter (PM 10 and PM 2.5). Emissions on a project level would be below listed thresholds and mitigation would further reduce impacts. However, in consideration of past, present, and reasonably foreseeable projects and the uncertainty of the project’s regional and localized health impacts associated with criteria air pollutants, such as PM2.5, along with indirect linkages of criteria pollutants and COVID-19, on vulnerable populations, the cumulative impacts of the proposed project would be significant and unavoidable.</p>			
Biological Resources			
<p>Impact 4.4-1: The Project Would Have a Substantial Adverse Effect, Either Directly or Through Habitat Modifications, on Any Species Identified as a Candidate, Sensitive or Special Status Species in Local or Regional Plans, Policies or Regulations, or by the CDFW or USFWS.</p>	<p>Potentially Significant</p>	<p>Implement Mitigation Measure MM 4.9-2 as discussed in Section 4.9, Hazards and Hazardous Materials, below. MM 4.4-1 Prior to initiation of any site preparation and/or construction activities on the currently vacant 56 acres, the project proponent shall retain a qualified biologist who meets the qualifications of an authorized biologist as defined by U.S. Fish and Wildlife Service to oversee compliance with protection measures for all listed and other special-status wildlife species. The Lead Biologist will have oversight over implementation of all necessary avoidance and minimization efforts and will have the authority to stop construction activities, if any of the requirements associated with these measures are not being fulfilled. The following measures pertain to the Lead biologists on-site:</p>	<p>Less than significant</p>

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<ul style="list-style-type: none"> a. The qualified biologist(s) shall have the right to halt activities that are in violation of the special-status species mitigation measures, as well as any regulatory permits from the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife, if applicable. Work shall proceed only after hazards to special-status species are removed and the species is no longer at risk, or at the qualified biologist’s discretion. b. The qualified biologist(s) shall maintain a copy of applicable permits and biology-related plans on the project sites. c. The qualified biologist(s) shall have in their possession a copy of all mitigation measures while work is being conducted on the project sites. d. Prior to initiation of any site preparation and/or construction activities on the currently vacant 56 acres, contact information for the qualified biologist(s) shall be submitted to the Kern County Planning and Natural Resources Department. e. Individuals involved in biological monitoring shall be supervised by the qualified biologist(s) and shall have the appropriate experience to accomplish biological monitoring. Biological monitors shall comply with the above measures. <p>MM 4.4-2: Prior to the any site preparation and/or construction activities on the currently vacant 56 acres, and for the duration of construction activities on that acreage, all employees, contractors, or other person(s) working at the project site who are participating in construction activities at the project site shall attend an Environmental Awareness Training and Education Program (WEAP), developed and presented by a qualified biologist. The Worker Environmental Awareness Training and</p>	

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		<p>Education Program will be developed and presented by a qualified biologist(s) or designee approved by the qualified biologist(s) and may be conducted in person or via videotape or other electronically recorded media.</p> <p>Any personnel associated with construction that did not attend the initial Worker Environmental Awareness Training and Education Program shall attend a subsequent Worker Environmental Awareness Training and Education Program. Any employee responsible for the operations and maintenance or decommissioning of the project facilities shall also attend the Worker Environmental Awareness Training and Education Program prior to starting work on the project and on an annual basis.</p> <p>On-site employees responsible for the operations and maintenance of expanded project facilities shall also attend the Worker Environmental Awareness Training and Education Program prior to operations or decommissioning. The Worker Environmental Awareness Training and Education Program will be developed and presented by a qualified biologist(s) or designee approved by the qualified biologist(s). The Worker Environmental Awareness Training and Education Program shall include the components described below:</p> <ol style="list-style-type: none"> a. The Training Program shall include, but not be limited to, information on the life history of species including the, burrowing owl, Swainson’s hawk, San Joaquin kit fox, American badger, Blunt-Nosed Leopard Lizard, as well as other wildlife, nesting birds, and plant species that may be encountered during construction activities, their legal protections, the definition of “take” under the Endangered Species Act, measures to protect the species, reporting requirements, specific measures that each worker shall 	

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Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>employ to avoid take of wildlife species, and penalties for violation of the Act.</p> <ul style="list-style-type: none"> b. To ensure employees and contractors understand their roles and responsibilities, training may be conducted in languages other than English. c. An acknowledgement form signed by each worker indicating that Environmental Awareness Training and Education Program has been completed would be kept on record; d. A sticker shall be placed on hard hats indicating that the worker has completed the Environmental Awareness Training and Education Program. Construction workers shall not be permitted to operate equipment within the construction areas unless they have attended the Environmental Awareness Training and Education Program and are wearing hard hats with the required sticker; e. A copy of the training transcript and/or training video, as well as a list of the names of all personnel who attended the Environmental Awareness Training and Education Program and copies of the signed acknowledgement forms shall be submitted to the Kern County Planning and Natural Resources Department; and f. The construction crews and contractor(s) shall be responsible for unauthorized impacts from construction activities to sensitive biological resources that are outside the areas defined as subject to impacts by project permits. <p>MM 4.4-3: During construction and site improvements on the undeveloped 56 acres, the project proponent shall implement the general avoidance and protective measures described below.</p> <ul style="list-style-type: none"> a. Prior to conducting vegetation clearing or grading activities, a qualified biologist or biological monitor that 	

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		<p>has been approved by the qualified biologist shall perform preconstruction visual surveys of the area immediately prior to conducting these activities to ensure that no special-status animals are present. The qualified biologist or biological monitor shall monitor all initial construction and decommissioning ground-disturbing activities. A report of those activities shall be submitted to the Kern County Planning and Natural Resources Department within 30 days of completion of activities.</p> <ul style="list-style-type: none"> b. Sensitive biological resources (e.g., special-status species or nesting birds, etc.) within proposed impact areas, shall be delineated with stakes and/or flagging prior to construction to avoid sensitive biological resources where possible. Construction-related activities outside of the planned impact areas shall be avoided. c. All vehicles will be directed to exercise caution when commuting within the project area. A 15-mile per hour speed limit will be enforced on unpaved roads. d. Project employees will be provided with written guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards. e. A litter control program shall be instituted at the project site. All workers shall ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area are deposited in covered or closed trash containers. The trash containers shall be removed from the project area at the end of each working day. f. No canine or feline pets or firearms (except for federal, state, or local law enforcement officers and security personnel) shall be permitted on construction sites to avoid harassment, killing, or injuring of listed species. g. To prevent inadvertent entrapment of San Joaquin kit fox, American badgers, or other animals all excavated, steep-walled holes or trenches more than two feet deep shall be covered with plywood or similar materials at the close of each working day, or provided with one or more escape 	

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		<p>ramps constructed of earth fill or wooden planks that are no less than 12 inches wide and secured at the top and placed a minimum of every 100 feet within the open trench. Covered and non-covered holes or trenches shall be thoroughly inspected for trapped animals by a qualified biologist or their biological monitor at the beginning and end of each day. Immediately before such holes or trenches are filled, they shall again be thoroughly inspected by trained staff approved by the retained qualified biologist for trapped animals. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow for their escape. If a listed species is trapped, the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife, as appropriate for the species, and Kern County Planning and Natural Resources Department shall be contacted immediately.</p> <p>h. San Joaquin kit fox, burrowing owls, mammals, and nesting birds may use construction pipes, culverts, or similar structures for refuge or nesting. Therefore, all construction pipes, culverts, or similar structures with a diameter of 4 inches or more that are stored at the construction site for one or more overnight periods, shall be covered in such a way as to exclude wildlife from entry. If this is not possible, straight pipes shall be inspected for wildlife before moving or capping. Any pipes of this size that cannot be seen through completely must be covered if left overnight.</p> <p>i. If any such pipes are left overnight without being covered, shall be thoroughly inspected by a qualified biologist or the designated biological monitor for special-status wildlife or nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If an animal is discovered inside a pipe, that section of pipe shall not be moved until a qualified biologist has been consulted and the animal has either moved from the structure on its own accord or until the animal has been captured and</p>	

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Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>relocated by a qualified biologist holding the appropriate handling permits from the resource agencies.</p> <ul style="list-style-type: none"> j. All construction activities shall be confined within the project construction area, which may include temporary access roads, haul roads, and staging areas specifically designated and marked for these purposes. At no time shall equipment or personnel be allowed to adversely affect areas outside the project site. k. No vehicle or equipment parked on the project sites shall be moved prior to inspecting the ground beneath the vehicle or equipment for the presence of wildlife. If present, the animal shall be left to move on its own. l. Intentional killing or collection of any plant or wildlife species shall be prohibited. m. Because dusk and dawn are often the times when listed species are most actively foraging, all construction activities will cease 0.5 hour before sunset and will not begin prior to 0.5 hour before sunrise. Except when necessary for driver or pedestrian safety, lighting of the project site by artificial lighting during nighttime hours is prohibited. n. Tightly woven fiber netting or similar material shall be used for erosion control or other purposes at the project site to ensure that special-status species do not get trapped. This limitation will be communicated to the contractor through use of Special Provisions included in the bid solicitation package. o. Use of rodenticides and herbicides at the project site shall be avoided to the maximum extent feasible. If use is unavoidable, rodenticides and/or herbicides shall be utilized in such a manner to prevent primary or secondary poisoning of special-status species and depletion of prey populations on which they depend. All uses of such compounds shall observe labels and other restrictions mandated by the U.S. Environmental Protection Agency, 	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>California Department of Pesticide Regulation, and other appropriate state and federal regulations as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service or California Department of Fish and Wildlife.</p> <p>MM 4.4-4 A pre-construction survey by a qualified biologist or monitor shall be conducted no more than 30 days and no less than 14 days prior to the commencement of any site preparation, ground disturbance, and/or construction activities in previously undeveloped areas of the project site. If any evidence of occupation of that portion of the project site by listed or other special-status plant or animal species is observed, a buffer shall be established by a qualified biologist that results in sufficient avoidance to comply with applicable regulations. If sufficient avoidance cannot be established, the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be contacted for further guidance and consultation on additional measures. The project proponent or operator shall obtain any required permits from the appropriate wildlife agency. Copies of the pre-construction survey and results, as well as all permits and evidence of compliance with applicable regulations, shall be submitted to the Kern County Planning and Natural Resources Department.</p> <p>No-disturbance buffer distances shall be established prior to the commencement of any site preparation and/or construction activities, in consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife, if any listed or other special status plant or animal species is observed as listed in Mitigation Measures MM 4.4-5 through MM 4.4-10.</p> <p>MM 4.4-5: To mitigate for potential impacts to nesting birds, special-status birds including the Swainson’s hawk and peregrine falcon, and birds protected under the Migratory Bird</p>	

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Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>Treaty Act and California Fish and Game Code during construction, operation, and decommissioning activities, the following measures shall be implemented as part of the approval for a grading or building permit:</p> <ul style="list-style-type: none"> a. During the avian nesting season (February 1–August 31), a qualified biologist shall conduct a preconstruction avian nesting survey no more than 7 days prior to initial vegetation clearing. Surveys need not be conducted for the entire project site at one time; they may be phased so that surveys occur within 7 days prior to clearing or disturbance in specific areas of the site. The surveying biologist must be qualified to determine the species, status, and nesting stage without causing intrusive disturbance. At no time shall the biologist be allowed to handle the nest or its eggs. The survey shall cover all reasonably potential nesting locations on and within 500 feet of the project site including ground nesting where species, such as California horned lark and killdeer might nest all shrubs that could support nests, and suitable raptor nest sites such as nearby trees, windrows and power poles. Swainson’s hawk nest surveys will be conducted prior to construction according to the Swainson’s Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California (California Department of Fish and Wildlife, 2010) and within a 5-mile buffer around the project site. Access shall be granted on private offsite properties prior to conducting surveys on private land. If access is not obtainable, the biologist shall survey these areas from the nearest vantage point with use of spotting scopes or binoculars. b. If construction is scheduled to occur during the non-nesting season (September 1–February 1), no preconstruction surveys or additional measures are required for non-listed avian species. 	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>c. If construction begins in the non-nesting season and proceeds continuously into the nesting season within any particular construction or decommissioning area, no surveys are required for non-listed avian species so long as all suitable nesting sites have been cleared from active construction/decommissioning areas.</p> <p>d. If active nests are found, a 300-foot no-disturbance buffer shall be created around passerine species’ nests unless adjusted by the qualified biologist based on the needs and sensitivities of individual species, a 0.5-mile no-disturbance buffer for Swainson’s hawk nest, and a 500-foot no-disturbance buffer around other raptor species’ nests (or a suitable distance otherwise determined in consultation with California Department of Fish and Wildlife). Any nest of a federal- or State-listed bird species shall require consultation with the appropriate agency (United States Fish and Wildlife Service or the California Department of Fish and Wildlife) to determine the appropriate buffer distance surrounding the nest to provide adequate nest protection. These buffers shall remain in effect until a qualified wildlife biologist has determined that the birds have fledged or the proposed project component(s) have been redesigned to avoid the area. All no-disturbance buffers shall be delineated in the field with visible flagging or fencing material.</p> <p>MM 4.4-6: The project proponent/operator shall implement the following measures to ensure potential impacts to San Joaquin kit fox resulting from project activities will be avoided and minimized to less-than-significant levels.</p> <p>a. Pre-construction surveys shall be conducted within the disturbance zone and a 200-foot buffer around the disturbance zone in suitable habitat within 14 days prior to the beginning of each construction area of grading or construction activity. Pre-construction surveys will</p>	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>identify San Joaquin kit fox habitat features on the project site and evaluate use by San Joaquin kit fox. The status of all possible San Joaquin kit fox dens will be categorized as a potential, atypical, known, or pupping den type and will be mapped. The results of these surveys shall be submitted to the County and resource agencies (as required) within 5 days of survey completion and prior to commencement of ground disturbance and/or construction activities.</p> <p>b. Biological monitor should be present while ground disturbing activities are occurring in suitable habitat if the preconstruction survey indicates that San Joaquin kit fox may be present. If San Joaquin kit fox dens are present, appropriate buffers will be established with highly visible markers according to the buffer distances, as described below by den type prior to construction activities.</p> <ol style="list-style-type: none"> 1. San Joaquin kit fox potential or atypical den: If a potential or atypical den is found, placement of four or five flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required but the 50-foot exclusion zone must be observed. Essential vehicle operation on existing roads and foot traffic is permitted within the exclusion zones, but the speed limit shall be 15 miles per hour within the exclusion zone. 2. San Joaquin kit fox known den: If a known den is found, a 100-foot exclusion zone shall be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by San Joaquin kit fox. Acceptable fencing includes untreated wood particleboard, silt fencing, orange construction fencing, or other fencing as long as it has openings for San Joaquin kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction-related disturbances have ceased, or until the den has been monitored and a lack of San Joaquin kit fox 	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>activity is documented, as described under Den Excavation, below. At that time, all fencing shall be removed to avoid attracting post- construction attention to the dens, or the den can be excavated as described under Den Excavation, below.</p> <ul style="list-style-type: none"> c. San Joaquin kit fox natal/pupping den: If a San Joaquin kit fox natal/pupping den is documented during pre-construction surveys, a 200-foot exclusion zone shall be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by San Joaquin kit fox. Acceptable fencing includes untreated wood particleboard, silt fencing, orange construction fencing, or other fencing as long as it has openings for San Joaquin kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction-related disturbances have ceased, or until the den has been monitored and a lack of San Joaquin kit fox activity is documented, as described under Den Excavation, below. At that time, all fencing shall be removed to avoid attracting post-construction attention to the dens, or the den can be excavated. d. Buffer distances and measures can be modified with prior authorization from U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. e. Den Excavation: Based on the results of the pre-construction surveys, if avoidance of dens is not a reasonable alternative, limited destruction of San Joaquin kit fox dens may be allowed. Dens shall be fully excavated, filled with dirt, and compacted so that San Joaquin kit fox cannot reenter the den during the construction period. Hand excavation shall be used whenever feasible. If at any point during the excavation a San Joaquin kit fox is discovered inside the den, the excavation activity shall cease immediately, and the den shall be monitored as described below. Destruction of the den may be completed when, in the judgment of the project Lead Biologist, the 	

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Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>animal has escaped without further disturbance. Excavation of dens shall be conducted under the supervision of biologist, in accordance with U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox prior to or during Ground Disturbance.</p> <ol style="list-style-type: none"> 1. Absolutely no excavation of San Joaquin kit fox known dens shall occur without prior authorization from the U.S. Fish and Wildlife Service or California Department of Fish and Wildlife. Destruction of any known or natal/pupping San Joaquin kit fox den requires take authorization from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. 2. Natal/pupping dens: Natal/pupping dens that are occupied will not be destroyed until the pups and adults have vacated and consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife has occurred. 3. Known dens: Known dens within the project footprint must be monitored for 3 days/nights using a tracking medium or infrared camera stations to determine the current use. If no San Joaquin kit fox activity is observed during this period, the den shall be destroyed immediately to prevent future use. If San Joaquin kit fox activity is observed at the den, then the den shall be monitored for at least 4 consecutive days from the time of observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging the entrance(s) with soil in such a manner that any resident animal can escape easily. Once the den is determined to be unoccupied, then the den may be excavated. If the animal is still present after 4 or more consecutive days of plugging and monitoring, the den 	

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		<p>may have to be excavated when, in the judgment of the project Lead Biologist, it is temporarily vacant; for example, during the animal’s normal foraging activities.</p> <p>4. Potential/atypical dens: If a take authorization/permit has been obtained from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife, destruction of potential and atypical dens may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential and atypical dens should be monitored as if they were known dens. If any den was considered to be a potential or atypical den, but is later determined during monitoring or destruction to be currently or previously used by San Joaquin kit fox (e.g., if San Joaquin kit fox sign is found inside), then all construction activities shall cease and the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be notified immediately.</p> <p>f. To prevent inadvertent entrapment of San Joaquin kit fox during construction, all excavated, steep-walled holes, or trenches more than 2 feet deep shall be covered with plywood or similar materials at the close of each working day by plywood or similar materials or, or be provided with one or more escape ramps constructed of earth fill or wooden planks (wooden planks should be no less than 10 inches in width and should reach to bottom of trench and be installed at 1:1 slope). Before such holes or trenches are filled, they shall be thoroughly inspected for trapped San Joaquin kit fox.</p> <p>g. Construction materials will not be stacked in a manner that allows San Joaquin kit fox to establish den sites within the material. Construction items such as solar panel and equipment transported to the project on pallets will be</p>	

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Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>placed directly on the ground, and the pallets removed from the site. All pipes, culverts, or similar structures with a diameter of 4 inches or more that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for San Joaquin kit fox before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If San Joaquin kit fox is discovered inside a pipe, the project biologist shall flush the species from the pipe. If San Joaquin kit fox is discovered that section of pipe shall not be moved until the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife has been consulted. If necessary, under the direct supervision of the project biologist, the pipe may be moved once to remove it from the path of construction activity until the species has escaped.</p> <ul style="list-style-type: none"> h. Unless biological monitors allow alterations to routes, all project vehicles should be confined to existing roads or prominently staked and/or flagged access routes that are surveyed prior to use. i. Speed limits should be restricted to 15 miles per hour during daylight hours (5 am to 9 pm) and 10 miles per hour during night-time hours on the site and 25 miles per hour on public roads in the vicinity during both day and night-time driving. j. Project will be constructed with appropriate kit fox-friendly standards, which includes fencing plan that will allow require kit-fox permeable fencing surrounding the site so that kit foxes can pass through the project site. There will be no mass grading of the site. <p>MM 4.4-7: The project proponent shall consult with the California Department of Fish and Wildlife (CDFW) regarding needed mitigation for potential impacts to burrowing owl if they are present. In consultation with CDFW the applicant shall implement the following measures as requested. These measures are based on the recently updated CDFW 2012 Staff Report on</p>	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>Burrowing Owl Mitigation. Coordination of mitigation efforts between the applicant and CDFW will be used to determine which of the following mitigation efforts would be needed to ensure potential impacts to burrowing owl resulting from project implementation will be avoided and minimized to less-than-significant levels:</p> <ul style="list-style-type: none"> a. A qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct pre-construction surveys of the permanent and temporary impacts areas, plus an ISO-meter (approximately 492-foot) buffer, to locate active breeding or wintering burrowing owl burrows no less than 14 days prior to construction. The survey methodology will be consistent with the methods outlined in the Staff Report and will consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing. As each burrow is investigated, biologists will also look for signs of American badger and kit fox. Copies of the survey results shall be submitted to the California Department of Fish and Wildlife and Kern County Planning and Natural Resources Department. b. If burrowing owls are detected, no ground-disturbing activities, such as road construction or ancillary facilities, shall be permitted within the distances listed below in the table titled “Burrowing Owl Burrow Buffers,” unless otherwise authorized by California Department of Fish and Wildlife. Burrowing owls shall not be moved or excluded from burrows during the breeding season. c. If avoidance of active burrows is infeasible, the owls can be passively displaced from their burrows according to recommendations made in the 2012 Staff Report on Burrowing Owl Mitigation. Burrowing owls should not be excluded from burrows unless or until: <ul style="list-style-type: none"> 1. Occupied burrows shall not be disturbed during the nesting season unless a qualified biologist meeting 	

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		<p>the Biologist Qualifications set forth in the May 2012 California Department of Fish and Wildlife Staff Report, verifies through noninvasive methods that either: (1) the owls have not begun egg-laying and incubation; or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Burrowing owls will not be moved or excluded from burrows during the breeding season.</p> <p>2. A Burrowing Owl Exclusion Plan is developed and approved by the applicable local California Department of Fish and Wildlife office and submitted to the Kern County Planning and Natural Resources Department. The plan shall include, at a minimum:</p> <ul style="list-style-type: none"> A. Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping. B. Type of scope and appropriate timing of scoping to avoid impacts; C. Occupancy factors to look for and what will guide determination of vacancy and excavation timing (one-way doors should be left in place 48 hours to ensure burrowing owls have left the burrow before excavation, visited twice daily, and monitored for evidence that owls are inside and can't escape, i.e., look for sign immediately inside the door); D. How the burrow(s) will be excavated: Excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible (may include using piping to stabilize the burrow to prevent collapsing until the 	

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		<p>entire burrow has been excavated and it can be determined that owls reside the burrow);</p> <ul style="list-style-type: none"> E. Removal of other potential owl burrow surrogates or refugia on-site. F. Photographing the excavation and closure of the burrow to demonstrate success and sufficiency; G. Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take; and H. How the impacted site will continually be made inhospitable to burrowing owls and fossorial mammals (e.g., by allowing vegetation to grow tall, heavy disking, or immediate and continuous grading) until development is complete. <ul style="list-style-type: none"> 3. Permanent loss of occupied burrow(s) and habitat is mitigated in accordance with the measures described below. 4. Temporary exclusion is mitigated in accordance with the measures described below. 5. Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Conduct daily monitoring for 1 week to confirm young of the year have fledged if the exclusion will occur immediately after the end of the breeding season. 6. Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band re-sight) 	

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Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<ul style="list-style-type: none"> d. In accordance with the Burrowing Owl Exclusion Plan, a qualified wildlife biologist shall excavate burrows using hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially active burrows within 160 feet of the active burrow. The one-way doors can be removed 48 hours after installation, and ground-disturbing activities can proceed. Alternatively, burrows can be filled to prevent reoccupation. e. During construction activities, monthly and final compliance reports shall be provided to the California Department of Fish and Wildlife, Kern County Planning and Natural Resources Department, and other applicable resources agencies documenting the effectiveness of mitigation measures and the level of burrowing owl take associated with the proposed project. f. Should burrowing owls be found on-site, compensatory mitigation for lost breeding and/or wintering habitat shall be implemented on-site or off-site in accordance with Burrowing Owl Staff Report guidance and in consultation with the California Department of Fish and Wildlife. At a minimum, the following recommendations shall be implemented: <ul style="list-style-type: none"> 1. Temporarily disturbed habitat shall be restored, if feasible, to pre-project conditions, including decompacting soil and revegetating. If restoration is not feasible, then the project proponent shall implement (2) below. 2. Permanent impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat will be mitigated such that the habitat acreage, number of burrows, and burrowing owls impacted are replaced based on a site-specific analysis and shall include permanent conservation of similar vegetation 	

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		<p>communities (grassland, scrublands, desert, urban, and agriculture) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and with sufficiently large acreage, and presence of fossorial mammals. Conservation shall occur in areas that support burrowing owl habitat and can be enhanced to support more burrowing owls.</p> <ol style="list-style-type: none"> 3. Permanently protect mitigation land through a conservation easement deeded to a nonprofit conservation organization or public agency with a conservation mission. If the project is located within the service area of a California Department of Fish and Wildlife-approved burrowing owl conservation bank, the project operator may purchase available burrowing owl conservation bank credits. 4. Develop and implement a mitigation land management plan in accordance with Burrowing Owl Staff Report guidelines to address long-term ecological sustainability and maintenance of the site for burrowing owls. 5. Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism such as an endowment. 6. Habitat shall not be altered or destroyed, and burrowing owls shall not be excluded from burrows, until mitigation lands have been legally secured, are managed for the benefit of burrowing owls according to California Department of Fish and Wildlife-approved management, monitoring and reporting plans, and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed. 7. Mitigation lands should be on, adjacent to, or in proximity to the impact site, where feasible, and 	

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		<p>where habitat is sufficient to support burrowing owls.</p> <p>8. Consult with the California Department of Fish and Wildlife when determining off-site mitigation acreages.</p> <p>MM 4.4-8: The project proponent shall continuously comply with the following: If any burrowing owl burrows are observed during the pre-construction survey, avoidance measures shall be consistent with those included in the California Department of Fish and Wildlife staff report on burrowing owl mitigation (CDFG, 2012).</p> <p>If occupied burrowing owl burrows are observed outside of the breeding season, a passive relocation effort may be instituted in accordance with the guidelines established by the Staff Report on Burrowing Owl Mitigation (2012) by the California Department of Fish and Game (CDFG, 2012) in the table titled “below that shows the recommended restricted activity dates and setback distances by level of disturbance. During the breeding season, a buffer zone, as noted in Table 1, shall be maintained unless a qualified biologist verifies through noninvasive methods that either the birds have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Buffer zones may be reduced in size through consultation with appropriate agencies and the project biologist to determine if avoidance would still be achieved. The Kern County Planning and Natural Resources Department shall be kept apprised of meetings and correspondence for any consultation.</p>	

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Impact	Level of Significance before Mitigation	Mitigation Measure(s)					Level of Significance after Mitigation
		Location	Time of year	Level of Disturbance			
				Low	Medium	High	
		Nesting sites	April 1 – Aug 15	200 m	500 m	500 m	
		Nesting sites	Aug 16 – Oct 15	200 m	200 m	500 m	
		Nesting sites	Oct 16 – Mar 31	50 m	100 m	500m	
		<p>MM 4.4-9 The project proponent/operator shall implement the following measures to ensure potential impacts to blunt-nosed leopard lizard resulting from project implementation and improvement activities will be avoided and minimized to less-than-significant levels:</p> <p>Prior to grading initiation of improvement activities, to the 56 acres of undeveloped area, the project proponent shall conduct appropriate pre-construction surveys as identified below to avoid impacts to blunt-nosed leopard lizard.</p> <ul style="list-style-type: none"> a. All activities that will result in permanent or temporary ground disturbances to any previously undisturbed areas or adjacent to undisturbed areas should be preceded by a pre-construction survey within 14 days of construction by a qualified biologist(s). In addition, another pre-construction survey completed within 24 hours to the onset of construction will be conducted if potential habitat or the species is located. The biologist(s) should identify and clearly mark the location of areas where any blunt-nosed leopard lizard was observed. If a blunt-nosed leopard lizard is observed within the project site, U.S. Fish and Wildlife Service and California Department of Fish and Wildlife will be contacted to establish avoidance measures. If construction stops for longer than 2 weeks, a 					

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		<p>pre-construction survey will need to be conducted prior to construction starting again.</p> <p>b. A biological monitor(s) should be present while ground disturbing activities are occurring if the preconstruction survey indicates that blunt-nosed leopard lizard may be present. In addition to conducting preconstruction surveys, the biological monitors should aid crews in implementing/installing take avoidance measures for blunt-nosed leopard lizard and implementing project avoidance and mitigation measures if the preconstruction survey indicates the species may be present. Biological monitors are empowered to order cessation of activities if an immediate threat of “take” is identified, if take avoidance and/or mitigation measures are violated, or if a blunt-nosed leopard lizard is located within the construction area.</p> <p>c. If it is determined that the blunt nose leopard lizard is present during the pre-construction survey, to prevent inadvertent entrapment of blunt-nosed leopard lizard, open holes, steep-walled holes, or trenches more than 2 feet deep should be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth fill or wooden planks (wooden planks should be more no less than 10 inches in width and should reach to bottom of trench and be installed at a 1:1 slope). Before such holes or trenches are filled, they should be thoroughly inspected by a biological monitor for trapped animals.</p> <p>d. If it is determined that the blunt nose leopard lizard is present during the pre-construction, a project representative will be appointed who will be the contact source for any employee or contractor who inadvertently</p>	

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		<p>kills or injures a blunt-nosed leopard lizard or who finds a dead, injured, or entrapped individual blunt-nosed leopard lizard. The representative will be identified in the Worker Environmental Awareness Training and Education Program. U.S. Fish and Wildlife Service and California Department of Fish and Wildlife will be contacted immediately in the case of a dead, injured, or entrapped blunt-nosed leopard lizard by the chosen representative.</p> <p>If blunt nosed leopard lizard are detected during any identified survey of the project site, the following provisions will be implemented:</p> <ul style="list-style-type: none"> a. If blunt-nosed leopard lizard are observed within 50 feet of proposed disturbance areas during the initial clearance surveys, exclusion fencing shall be installed in such a manner as to segregate blunt-nosed leopard lizard from the construction/improvement areas and to ensure that direct take of the species does not occur. The actual distance from the construction/improvement areas where exclusion fencing is installed may depend on the conditions of the composting site, but the fencing will be installed at a maximum 50-foot radius from the outermost edge of the construction/improvement areas, directed by the authorized biologist. The project biologist shall be on site during the fencing installation to ensure that no blunt-nosed leopard lizard are inadvertently harmed/harassed during installation. b. Fencing shall provide escape routes from excluded construction areas to areas beyond the construction work area to enable blunt-nosed leopard lizard to move outside the excluded area away from construction activities. The fencing escape routes shall be closed to prevent blunt-nosed leopard lizard from reoccupying the area prior to 	

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		<p>commencing earth-disturbing activities. The fenced zone can be expanded in the project site, as necessary and following the same survey and escape route protocol described above, to exclude individual blunt-nosed leopard lizard from construction zones.</p> <p>c. If blunt-nosed leopard lizard are observed or suspected (based on scat, tail drag marks, or other sign) of occurring within a fenced construction zone during the exclusion zone surveys, daily surveys shall be conducted for another consecutive 5 days from the date of the observation to allow sufficient time for individual blunt-nosed leopard lizard to vacate the excluded area.</p> <p>MM 4.4-10: The project proponent/operator shall implement the following measures to ensure potential impacts to American badger resulting from project implementation/improvements will be avoided and minimized to less-than-significant levels:</p> <p>a. All activities that will result in permanent or temporary ground disturbances to previously undisturbed areas or that are adjacent to undisturbed areas shall be preceded by a preconstruction survey conducted by a biological monitor within 14 days prior to the beginning construction activity. The biologist(s) should identify and clearly mark the location(s) of areas where potential badger den(s) was/were identified. The surveys should be conducted in parallel transects spaced 30 feet apart.</p> <p>b. It may be determined that a biological monitor(s) should be present while ground disturbing activities are occurring based on the sensitivity of the habitat. If a badger den is located, the den(s) should be identified by highly visible flagging and avoided by a buffer with a radius determined by a biological monitor.</p>	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>c. If one or more badger dens are found during the pre-activity survey, the following steps will be taken:</p> <ol style="list-style-type: none"> 1. The den(s) will be carefully inspected to evaluate its activity status. If the biologist is uncertain about the activity status of a den, a tracking medium (such as diatomaceous earth) should be placed in front of the den for 3 consecutive nights. The tracking medium should be checked each following morning for tracks. 2. If no tracks are observed after three nights of monitoring, the den can be considered to be inactive. It should be completely excavated with hand tools until it is certain that no badgers are inside. When excavation is completed, the den should be backfilled and compacted to ensure that no badgers can re-enter the den during construction. If at any point during the excavation a badger is discovered inside the den, excavation should stop until the badger has been allowed to move away. Excavation should either be done by a qualified biologist or under the supervision of a qualified biologist. <p>d. If the den is active, it should be monitored for an additional five consecutive nights to allow badgers using the den to move to another den. The badger can be discouraged from continued use of the den by partially blocking the den entrance with soil. The soil should be placed in front of the den in such a manner that the resident badger is able to escape easily. When, in the judgement of the biologist, the badger has moved from the den, it should be excavated as explained above.</p> <p>MM 4.4-11: Prior to issuance of grading or building permits for the undeveloped 56 acres, a long-term trash abatement program shall be established for construction, operations and maintenance.</p>	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		Trash and food items shall be contained in closed containers and removed daily.	
Impact 4.4-2: The Project Would Interfere Substantially with the Movement of Any Native or Migratory Fish or Wildlife Species or With Established Native Resident or Migratory Wildlife Corridors or Impede the Use of Native Wildlife Nursery Sites.	Potentially significant	Implement Mitigation Measures MM 4.4-1 through MM 4.4-11 as described above.	Less than significant
Impact 4.4-3: The Project Would Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional or State Habitat Conservation Plan	No impact	No mitigation measures are required.	No impact
Cumulative Impacts: The proposed project would not make a substantial contribution and would not combine with other past, present, and reasonably foreseeable projects, resulting in a cumulative impact to biological resources. In addition, the project would implement MM 4.4-1 through MM 4.4-11 to ensure impacts remain less than significant. The project is located on a highly disturbed site with existing composting operations, does not provide valuable habitat, contain sensitive habitats, and sensitive species were not observed and would typically only be transient through the site. Mitigation has been included for species with potential to occur. As such, the proposed project would not result in cumulative impacts to wetlands or	Potentially significant	Implement Mitigation Measures MM 4.4-1 through MM 4.4-11 as described above. Also, Mitigation Measure MM 4.9-2 (see Section 4.9, Hazards and Hazardous Materials)	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>other sensitive habitats, special status plants, violation of local or ordinances protecting biological resources, or conflict with an adopted HCPs, NCCPs, or other approved local, regional, or State HCPs. Thus, cumulative impacts would be less than significant</p>			
Cultural Resources			
<p>Impact 4.5-1: The Project Would Cause a Substantial Adverse Change in the Significance of a Historical Resource as Defined in Section 15064.5.</p>	<p>Potentially Significant</p>	<p>MM 4.5-1 During implementation of the project, in the event archaeological materials are encountered, the project contractor shall cease any ground disturbing activities within 50 feet of the find. The area of the discovery shall be marked off by temporary fencing that encloses a 50-foot radius from the location of discovery. Signs shall be posted that establish it as an Environmentally Sensitive Area and all entrance to the area shall be avoided until the discovery is assessed by a qualified Archaeologist, as well as a Native American monitor. The Lead Archaeologist, in consultation with the Native American monitor, shall evaluate the significance of the resources and recommend appropriate treatment measures. If further treatment of the discovery is necessary, the Environmentally Sensitive Area shall remain in place until all work is completed. Per California Environmental Quality Act Guidelines Section 15126.4(b)(3), project redesign and preservation in place shall be the preferred means to avoid impacts to significant historical resources.</p> <p>Consistent with California Environmental Quality Act Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the Lead Archaeologist in consultation with the Native American monitor shall develop additional treatment measures in consultation with the County, which may include data recovery or other appropriate measures. The County shall consult</p>	<p>Less than significant</p>

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		with appropriate Native American representatives in determining appropriate treatment for unearthened cultural resources if the resources are prehistoric or Native American in nature. Diagnostic archaeological materials with research potential recovered during any investigation shall be curated at an accredited curation facility. The Lead Archaeologist, in consultation with a designated Native American monitor, shall prepare a report documenting evaluation and/or additional treatment of the resource. A copy of the report shall be provided to the Kern County Planning and Natural Resources Department and to the southern San Joaquin Valley Information Center at California State University, Bakersfield.	
Impact 4.5-2: The Project Would Cause a Substantial Adverse Change in the Significance of a Unique Archaeological Resource as Defined in Section 15064.5.	Potentially Significant	Implement Mitigation Measure MM 4.5-1 as described, above	Less than significant
Impact 4.5-3: The project would disturb human remains, including those interred outside of formal cemeteries	Potentially Significant	MM 4.5-2 If human remains are uncovered during project construction, the project contractor shall immediately halt work within 100 feet of the find, contact the Kern County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5(e)(1) of the California Environmental Quality Act Guidelines. If the County Coroner determines that the remains are Native American, the coroner shall contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5(c), and Public Resources Code 5097.98 (as amended by Assembly Bill 2641). The Native American Heritage Commission shall designate a Most Likely Descendent for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		and conferred with the most likely descendent regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et seq.) directing identification of the next-of-kin will apply.	
Cumulative Impacts- The proposed project would not make a substantial contribution and would not combine with other past, present, and reasonably foreseeable projects, resulting in a cumulative impact to cultural resources. In addition, the project would implement MM 4.5-1 and MM 4.5-2 to ensure impacts remain less than significant. The project is located on a highly disturbed site with existing composting operations, and due is unlikely to contain any unknown buried cultural or archaeological resources. Mitigation requires appropriate treatment of archaeological resources should they be located as well as making required notifications should human remains be found. Thus, the project’s incremental effect is not cumulatively considerable and impacts in this regard would be less than significant.	Potentially Significant	Implement Mitigation Measure MM 4.5-1 and MM 4.5-2 as described, above	Less than significant
Energy			
Impact 4.6-1: The Project Would Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption of Energy	Less than significant	Implement Mitigation Measure MM 4.3-5 as discussed in Section 4.3, Air Quality , above.	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Resources, During Project Construction or Operation			
Impact 4.6-2: The Project Would Conflict with or Obstruct State or Local Plan for Renewable Energy or Energy Efficiency	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts: The proposed project is not considered a wasteful or inefficient use of energy and as such, would not combine with past, present, or reasonably foreseeable projects to make a cumulative contribution to energy impacts. Construction and operation associated with implementation of the proposed project would result in the minimal increases in the consumption of fuel and energy, and any increases would not be in a wasteful or inefficient manner. Implementation of MM 4.3-5 would further reduce impacts. Thus, the proposed project would not contribute considerably to cumulative energy consumption, and cumulative impacts would be less than significant.	Less than significant	Implement Mitigation Measure MM 4.3-5 as discussed in Section 4.3, Air Quality , above.	Less than significant
Geology and Soils			
Impact 4.7-1: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo earthquake fault zoning map issued by the state geologist for the area or based on other substantial evidence of a known fault.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.7-2: The project would directly or indirectly cause potential substantial	Less than significant	No mitigation measures are required.	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
adverse effects, including the risk of loss, injury, or death involving: strong seismic ground shaking.			
Impact 4.7-3: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: seismic-related ground failure including liquefaction	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.7-4: The project would expose People or Structures to Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Landslides.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.7-5: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: substantial soil erosion or the loss of topsoil.	Potentially significant	<p>MM 4.7-1: The Project Proponent shall limit grading to the minimum area necessary for construction. Prior to the initiation of a construction or grading project exceeding one (1)-acre in size, the project proponent shall retain a California registered and licensed professional engineer to submit final grading earthwork and foundation plans prior to construction to the Kern County Public Works Department for approval.</p> <p>MM 4.7-2: The project proponent shall prepare a Soil Erosion and Sedimentation Control Plan to mitigate potential loss of soil and erosion due to project implementation. The Plan shall be prepared by a California registered and licensed civil engineer or other authorized professional and submitted for review and approval by the Kern County Public Works Department.</p> <ol style="list-style-type: none"> 1. The Soil Erosion and Sedimentation Control Plan shall include, but is not limited to, the following: <ol style="list-style-type: none"> a. Best Management Practices to minimize soil erosion consistent with Kern County grading requirements and the California Regional Water Quality Control Board requirements pertaining to the preparation and approval 	Less than significant.

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<ul style="list-style-type: none"> a. of a Stormwater Pollution Prevention Plan (Best Management Practices recommended by the Kern County Public Works Department shall be reviewed for applicability); b. Provisions to maintain flow in washes, should it occur, throughout construction. c. Provisions for site revegetation using native seed mix; d. Sediment collection facilities as may be required by the Kern County Public Works Department; e. A timetable for full implementation, estimated costs, and a surety bond or other security as approved by the County; and f. Other measures required by the County during permitting, including long-term monitoring (post-construction) of erosion control measures until site stabilization is achieved. 	
<p>Impact 4.7-6: The project would 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.</p>	<p>Potentially significant</p>	<p>MM 4.7-3: Obtain grading and building permits for any new structures.</p>	<p>Less than significant</p>
<p>Impact 4.7-7: The project would be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code (1994), creating substantial risks to life or property.</p>	<p>Potentially Significant</p>	<p>Implement MM 4.7-3.</p>	<p>Less than significant.</p>
<p>Impact 4.7-8: The project would have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Impact 4.7-9: The project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	Potentially Significant	MM 4.7-4 During implementation and operation of the project, if a paleontological resource is found, the project contractor shall cease ground-disturbing activities within 50 feet of the find. A qualified paleontologist shall evaluate the significance of the resource(s) and recommend appropriate treatment measures. At each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples shall be collected and submitted for analysis. Any fossils encountered and recovered shall be catalogued and donated to a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository.	Less than significant
Cumulative Impacts: The proposed project would not combine with other past, present, and reasonably foreseeable projects to make a cumulatively considerable contribution to impacts to geology and soils. Similar to the proposed project, other projects in the region but these impacts are site specific and would only have the potential to combine with impacts of the project if they occurred in the same location as the project. In addition, these projects, similar to the proposed project would be required to conform to the same regulatory requirements and would likely have to implement similar mitigation and/or site-specific mitigation (such as those MM 4.7-1 through MM4.7-4 , and MM 4.10-1 and MM 4.10-2 implemented as part of the project) depending on the site-specific conditions. The proposed project also	Potentially Significant	Implement Mitigation Measures MM 4.7-1 – 4.7-4 ; as described above, and MM 4.10-1 & MM 4.10-2 as described in Sections Hydrology and Water Quality , below.	Less than significant.

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
would not exacerbating existing geologic, soils, or seismic hazards or expose persons or structures to geologic, soils, or seismic hazards. Thus, cumulative impacts related to geology and soils would be less than significant.			
Greenhouse Gas Emissions			
Impact 4.8-1: The Project Would Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.8-2: The Project Would Conflict with an Applicable Plan, Policy or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases.	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts: The proposed project would not combine with past, present, or reasonably foreseeable projects resulting in a cumulative impacts related to GHG emissions. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. However, while it is not possible to determine whether the proposed project individually would have a significant impact on global warming or climate change, the proposed project would have an overall net decrease in incremental GHG emissions due to the benefits of composting including decreased soil erosion and decreased fertilizer usage.	Less than significant	No mitigation measures are required.	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Thus, impacts would be less than significant.			
Hazards and Hazardous Materials			
Impact 4.9-1: The project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Potentially significant	<p>MM 4.9-1: Prior to the issuance of grading or building permits for development into the undeveloped 56 acres, the project proponent shall update the Facility’s Hazardous Materials Business Plan to reflect changes to existing operations. Throughout the life of the Composting Facility, including decommissioning, the project operator shall maintain the Hazardous Materials Business Plan, as applicable, pursuant to Article 1 and Article 2 of California Health and Safety Code 6.95 and in accordance with Kern County Ordinance Code 8.04.030, by submitting all the required information to the California Environmental Reporting System at http://cers.calepa.ca.gov/ for review and acceptance by the Kern County Environmental Health Services Department/Hazardous Materials Section. The Hazardous Materials Business Plan shall:</p> <ul style="list-style-type: none"> a. Delineate hazardous materials and hazardous waste storage areas. b. Describe proper handling, storage, transport, and disposal techniques. c. Describe methods to be used to avoid spills and minimize impacts in the event of a spill. d. Describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction and operation. e. Establish public and agency notification procedures for spills and other emergencies including fires. f. Include procedures to avoid or minimize dust from existing residual pesticides and herbicides that may be present on the site. <p>The project proponent shall ensure that all contractors working on the project are familiar with the Facility’s Hazardous Materials</p>	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		Business Plan as well as ensure that one copy is available at the project site at all times. In addition, a copy of the accepted Hazardous Materials Business Plan from California Environmental Reporting System shall be submitted to the Kern County Planning and Natural Resources Department for inclusion in the projects permanent record.	
Impact 4.9-2: The project would 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	Potentially significant	Implement MM 4.9-1 and; MM 4.9-2: The project proponent shall continuously comply with the following: <ul style="list-style-type: none"> a. The construction contractor or project personnel shall use herbicides that are approved for use in California, and are appropriate for application adjacent to natural vegetation areas (i.e. non-agricultural use). Personnel applying herbicides shall have all appropriate state and local herbicide applicator licenses and comply with all state and local regulations regarding herbicide use. b. Herbicides shall be mixed and applied in conformance with the manufacturer’s directions. c. The herbicide applicator shall be equipped with splash protection clothing and gear, chemical resistant gloves, chemical spill/splash wash supplies, and material safety data sheets for all hazardous materials to be used. To minimize harm to wildlife, vegetation, and water bodies, herbicides shall not be applied directly to wildlife. d. Products identified as non-toxic to birds and small mammals shall be used if nests or dens are observed; and herbicides shall not be applied if it is raining at the site, rain is imminent, or the target area has puddles or standing water. e. Herbicides shall not be applied when wind velocity exceeds 10 miles per hour. If spray is observed to be 	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		drifting to a non-target location, spraying shall be discontinued until conditions causing the drift has abated.	
Impact 4.9-3: The project would emit hazardous emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School	No impact	No mitigation measures are required.	No impact
Impact 4.9-4: The project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment	No impact	No mitigation measures are required.	No impact
Impact 4.9-5: For a project located within the adopted Kern County Airport Land Use Compatibility Plan, the project would result in a safety hazard or excessive noise for people residing or working in the project area.	No impacts	No mitigation measures are required.	No impacts
Impact 4.9-6: The project would impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan	No impact	No mitigation measures are required.	No impact
Impact 4.9-7: The project would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires	No impact	No mitigation measures are required.	No impact
Impact 4.9-8: Would Implementation of the Project Generate Vectors or Have a Component That Includes Agricultural Waste Exceeding Adopted Qualitative Thresholds.	Potentially significant	MM 4.9-3: Prior to the acceptance of the expanded feedstock materials into the Facility, the project proponent shall update the Facility’s existing Report of Composting Site Information, including the Vector Control Plan and submit it to the Kern County Environmental Health Services Division for review and	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		approval. The Plan shall include Best Management Practices such as: good housekeeping measures to minimize harborage for vectors, and the timely incorporation of material into the composting process. Further controls may include the use of traps or other abatement controls, and/or the use of a licensed pest management service if needed.	
<p>Cumulative Impacts – The proposed project would not make a cumulative contribution in conjunction with other past, present, and reasonably foreseeable project to hazards and hazardous materials. The cumulative projects range in scope from renewable energy projects, development, and others. Risks related to hazards and hazardous materials tend to be localized in nature and are mitigated and managed on a project-by-project basis based on uses. The proposed project would not handle any substantive quantities of hazardous materials such that there would be negligible emissions and is not on a hazardous materials site. Unauthorized releases during construction, similar to other projects, would be isolated and managed through conformance with existing state and County regulations, as well as project safety design features and the implementation. The project would include MM 4.9-1 through MM 4.9-3. Thus, with the minimal risks of hazards at the project site, cumulative impacts would not be cumulatively significant.</p>	Potentially significant	Implement Mitigation Measures MM 4.9-1 through MM 4.9-3 , as described above.	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Hydrology and Water Quality			
Impact 4.10-1: The project would violate water quality standards or waste discharge requirements, or otherwise degrade water quality.	Potentially significant	<p>Implement Mitigation Measure MM 4.10-1 and 4.10-2, as described below, Mitigation Measures MM 4.9-1, from Section 4.9, Hazardous and Hazardous Materials, and Mitigation Measure MM 4.7-2 from Section 4.7, Geology and Soils.</p> <p>MM 4.10-1: The Applicant shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) as required under the General Construction Permit for Discharges of Storm Water Associated with Construction Activities, for all construction phases of the project. The SWPPP shall identify pollutant sources that may affect the quality of stormwater discharge and shall require the implementation of best management practices (BMPs) to reduce pollutants in stormwater discharges. BMPs include temporary erosion control measures (such as fiber rolls, staked straw bales), landscaping, and sediment basins. Applicant shall apply for and receive approval from the Regional Water Quality Control Board for the proposed project through issuance of revised site-specific waste discharge requirements (WDRs) or confirmation of coverage under the General Order.</p> <p>MM 4.10-2: During operations, the applicant shall deploy good housekeeping measures to minimize stormwater contact with feedstock or compost. Specific actions shall include maintaining areas between compost piles, areas used for feedstock management, on-haul and off-haul areas, and other areas of the project site free of compost and compost feedstock.</p>	Less than significant
Impact 4.10-2: The project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede	Less than significant	No mitigation measures are required.	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
sustainable groundwater management of the basin.			
Impact 4.10-3: The project would 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 result in a substantial erosion or siltation on- or off-site; substantially increase the rate of amount of surface runoff in a manner which would result in flooding on or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impeded or redirect flood flows	Potentially significant	Implement Mitigation Measures MM 4.7-1 and MM 4.7-2 from Section 4.7, Geology and Soils , and MM 4.10-1 and MM4.10-2 , as described above.	Less than significant
Impact 4.10-4: The project would result in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.10-5: The project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts: The proposed project would not make a cumulative contribution in conjunction with other past, present, and reasonably foreseeable projects to impacts to hydrology and water quality. The general cumulative setting for surface water quality includes the San Joaquin		Implement Mitigation Measures MM 4.7-1 , MM 4.7-2 , MM 4.9-1 , MM 4.9-2 , MM 4.10-1 and MM 4.10-2 , as described above.	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>River and Tulare Lake Hydrologic Regions. Similar to other projects within the region, the proposed project would be required to implement a storm water pollution prevention plan (SWPPP) and associated best management practices (BMPs) to minimize potential for release of pollutants and sediment into surface water. Similar to the proposed project, these measures are anticipated to reduce impacts of other projects. Erosion, drainage, and flooding are localized effects and project would not make a cumulative contribution in this regard. Thus, cumulative impacts would be less than significant with the implementation of MM 4.7-1 and 4.7-2, and 4.9-1, above, as well as 4.10-1 and 4.10-2. Impacts would be less than significant.</p>			
Land Use and Planning			
<p>Impact 4.11-1: The project would conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>
<p>Cumulative Impacts: The proposed project would not result in cumulative impacts, in conjunction with past, present, and reasonably foreseeable project in regard to land use and planning. The proposed project is consistent with the intent of the</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>uses prescribed for the project site, including those described in the Kern County Zoning Ordinance. the goals and policies of the Kern County General Plan and SKICSP. Potential land use impacts of the proposed project use would be limited to adjacent parcels and the surrounding planned development areas, and the proposed project is consistent with these uses and would not preclude any planned uses. Lastly, all related projects would be required to undergo environmental review on a case-by-case basis, in accordance with the requirements of CEQA. Thus, the impacts of the proposed project on a cumulative level related to land use and planning would be less than significant.</p>			
Mineral Resources			
<p>Impact 4.12-1: The project would result in the loss of availability of a known mineral resource that would be of value to the region and residents of the State.</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>
<p>Impact 4.12-2: The project would 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.</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>
<p>Cumulative Impacts: The proposed project would not, in conjunction with past, present and reasonably foreseeable projects, make a cumulative contribution to impacts to mineral resources. The geographic scope of impacts associated with mineral resources generally encompasses the project site and a 0.25-mile-radius area around the project site.</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>The project site is not within an identified zone containing significant mineral resources, the site is not used for mineral resource extraction, and the project would not preclude any adjacent areas from use for mineral resource extraction. Thus, the proposed project would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site. Impacts would be less than significant.</p>			
Noise			
<p>Impact 4.13-1: The project would generate a substantial temporary or permanent increase in the 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.</p>	<p>Less than significant</p>	<p>MM 4.13-1: The following measures are to be implemented to further reduce short-term noise levels associated with project construction activities:</p> <ul style="list-style-type: none"> a. Construction equipment shall be fitted with noise-reduction features such as mufflers and engine shrouds that are no less effective than those originally installed by the manufacturer. b. Construction activities at the project site shall comply with the hourly restrictions for noise-generating construction activities, as specified in the County’s Code of Ordinances, Chapter 8.36. Accordingly, construction activities shall be prohibited between the hours of 9 p.m. to 6 a.m. on weekdays, and between 9 p.m. to 8 a.m. on weekends. These hourly limitations shall not apply to activities where hourly limitations would result in increased safety risk to workers or the public, such as commissioning and maintenance activities that must occur after dark to ensure photovoltaic arrays are not energized, unanticipated emergencies requiring immediate attention, or security patrols. 	<p>Less than significant</p>

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<ul style="list-style-type: none"> c. Haul trucks shall not be allowed to idle for periods greater than five minutes, except as needed to perform a specified function (e.g., concrete mixing). d. Onsite vehicle speeds shall be limited to 15 miles per-hour, or less (except in cases of emergency). e. Back-up beepers for all construction equipment and vehicles shall be broadband sound alarms or adjusted to the lowest noise levels possible, provided that the Occupational Safety and Health Administration and California Division of Occupational Safety and Health’s safety requirements are not violated. On vehicles where back-up beepers are not available, alternative safety measures such as escorts and spotters shall be employed. 	
Impact 4.13-2: The project would expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.13-3: The project would create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts: The proposed project would not make a cumulative contribution in conjunction with other past, present, or reasonably foreseeable project to the noise environment. The project site is surrounded by vacant land, none of which is planned for sensitive uses, solar facilities, and petroleum/natural gas sites and pipelines. The proposed project would generate short-term and long-term noise during construction and operation from the use	Less than Significant.	Even though the Project does not result in a significant impact, the project is required to Implement Mitigation Measure MM 4.13-1 .	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>and movement of heavy construction equipment and vehicles and the operation of new equipment. However, due to the ambient noise levels and the nearest sensitive receptors approximate 1.5-miles away the project’s contribution to future noise levels would be minor and would not result in a cumulatively considerable contribution to cumulative noise levels or noise impacts. Noise would be further reduced through the implementation of MM 4.13-1.</p>			
Public Services			
<p>Impact 4.14-1: The project would result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services.</p>	<p>Less than significant</p>	<p>Implement Mitigation Measures MM 4.9-1. (see Section 4.9, Hazards and Hazardous Materials, above)</p> <p>MM 4.14-1: Prior to the operation of expanded composting activities in the 100-acre project site under the CUP modification the project proponent shall coordinate with Kern County to determine the need for payment of land development services fees, in accordance with the Kern County Land Development Services Fee Schedule. While the proposed project would not increase the allowable tonnage at the site, and the trips are accounted for in the existing CUP, the applicant shall coordinate and submit evidence of payment to the Kern County Planning and Natural Resources Department prior to issuance of grading or building permits. Payment of fees will be provided for sheriff’s patrol and investigative services, and fire services</p>	<p>Less than significant</p>
<p>Cumulative Impacts: The proposed project would not result in cumulative impacts to public services in conjunction with past, present, and reasonably foreseeable</p>	<p>Less than significant</p>	<p>Implementation of Mitigation Measures MM 4.9-1 through MM 4.9-3 and MM 4.14-1 would further reduce impacts.</p>	<p>Less than significant</p>

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>projects. The project would result in minimal increase demand for police, fire, and other services and would not combine with other projects such that the construction of new facilities would be needed. In addition, the proposed project along with other projects would pay development impact mitigation fee, if deemed appropriate by the Kern County Planning and Natural Resources Department or equivalent agency (in the case of fire protection). Payment of fees would help ensure that appropriate level of public service staffing would be maintained. Thus, impacts would not be cumulatively considerable and would be further reduced through the implementation of MM 4.9-1 through MM 4.9-3, and MM 4.14-1.</p>			
Transportation and Traffic			
<p>Impact 4.15-1: The project would conflict with an applicable program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities.</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>
<p>Impact 4.15-2: The project conflict or be inconsistent with CEQA Guideline section 15064.3.</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>
<p>Impact 4.15-3: The project would substantially increase hazards due to a design feature</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>
<p>Impact 4.15-4: The Project Would Result in Inadequate Emergency Access.</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>Cumulative Impacts: The proposed project would not make a cumulative contribution in conjunction with other past, present, or reasonably foreseeable project to the transportation. The projects contribution future traffic conditions was evaluated to consider regional population and employment growth and in consideration of other projects. The project is located in an area with sparse development and minimal vehicle traffic on area roadways including projects in the vicinity of the proposed project. The proposed project is not located in proximity to any residential development which is the primary driver of transportation impacts. Taking into account regional growth and levels of service (LOS), the proposed project would add a total of approximately 135 trips, over existing vehicle trips needed for employees and trucks to haul materials to and from the project site. This is not considered a substantial increase and would not result in significant traffic impacts. No mitigation is required.</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>
Tribal Cultural Resources			
<p>Impact 4.16-1: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
California Native tribe that is listed or eligible for listing in the CRHR, or in a local register of historical Resource as Defined in Section 5020.1(k).			
Impact 4.16-2: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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 that is 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 2024.1 the lead agency shall consider the significance of the resource to a California Native American tribe	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts: The proposed project would not combine with past, present, or reasonably foreseeable projects that would combine to result in an impact to tribal and cultural resources. The geographic scope for cumulative impacts to tribal cultural resources includes the southwestern region of the San Joaquin Valley that contains similar environments, landforms within the same Native American tribal territories. The new equipment and expansion of	Less than significant	No mitigation measures are required.	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>above ground operations combined with other projects were considered and found to not make a cumulative contribution to tribal cultural resources. No tribal cultural resources have been identified in the project area and the project would not have an impact on tribal cultural resources. Thus, impacts would be less than significant.</p>			
Utilities and Service Systems			
<p>Impact 4.17-1: The project would 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.</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>
<p>Impact 4.17-2: The project would have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>
<p>Impact 4.17-3: The project would 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 demand in addition to the providers existing commitments.</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>
<p>Impact 4.17-4: The project would generate solid waste in excess of State or local standards, or in excess of the capacity of</p>	<p>Potentially significant</p>	<p>MM 4.17-1: During construction and operation, debris and waste generated shall be recycled to the extent feasible.</p>	<p>Less than significant</p>

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>local infrastructure, or otherwise impair the attainment of solid waste reduction goals</p>		<ul style="list-style-type: none"> a. An onsite Recycling Coordinator shall be designated by the project proponent to facilitate recycling as part of the Maintenance, Trash Abatement and Pest Management Program. b. The Recycling Coordinator shall facilitate recycling of all construction waste through coordination with contractors, local waste haulers, and/or other facilities that recycle construction/demolition/wastes. c. The onsite Recycling Coordinator shall also be responsible for ensuring wastes requiring special disposal are handled according to State and County regulations that are in effect at the time of disposal. d. Contact information of the coordinator shall be provided to the Kern County Planning and Natural Resources Department prior to issuance of building permits. <p>MM 4.17-2: The owner/operator of the project shall continuously comply with all of the following provisions.</p> <ul style="list-style-type: none"> a. The reporting and payment provisions below shall commence within 10 days of the facility receiving a revised Solid Waste Facility Permit from California Department of Resources Recycling and Recovery permitting the facility, among other things, to receive food materials for preprocessing at the project. A copy of the issued permit shall be provided to the Kern County Planning and Natural Resources Department and Kern County Public Works Department – Operations Division. b. A monthly report showing the tonnage and origin of inbound material shall be provided by the owner/operator of the project to the Kern County Public Works Department 	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>– Operations Division on or before the 15th day of the following month.</p> <p>c. With 60 days prior written notice, the owner/operator of the project will process up to 10 percent of the operating capacity of Acceptable Material, including Food Material, originating within the County that is received at any Kern County operated facility and transported to the South Kern Industrial Center, LLC Project Site by Kern County or its transportation contractors. All materials delivered to the Facility shall meet Facility standards applicable to all customers and meet all applicable quality standards related to the amount of contaminants. The fee charged to the County will be the then-current market rate for materials of similar quality and subject to a contract that will be negotiated between the County and Facility Operator prior to the start of deliveries.</p> <p>d. Kern County hereby imposes a host fee payable by the owner/operator of \$0.25 for each ton of out-of-County material of any type accepted at the composting facility. This fee shall commence 60 days after the CUP Amendment becomes final and non-appealable. On July 1, 2022, and each July 1 thereafter, the host fee shall be adjusted by the annual percentage change in Consumer Price Index over the 12-month period ending on the immediately preceding March 31. The \$0.25 fee shall be directed to the General Fund for the Board adopted Kern County Westside Economic Stability and Tourism Reinvestment Zone for use in that area for improvements to the community including, but not limited to, streetlights,</p>	

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>park and library improvements, road infrastructure and improvements, community programs, nuisance abatement and other community benefits. Determination of the use of the money shall be as established by the Kern County Westside Economic Stability and Tourism Reinvestment Zone Map. This mitigation funding will not be affected or stopped by any declaration of a Fiscal Emergency by the Board of Supervisors that temporarily stops property and sales tax contributions to the fund, as mitigation funding shall continue to be collected and spent.</p> <p>e. Kern County hereby imposes a fee, payable by the facility’s owner/operator, of \$100 per ton (“Fee”) for compost facility residual material that goes to “Disposal” -as reported to the state of California pursuant to 14 CCR Section 18815.1, et seq. (“Code”), The Fee is to be paid to Kern County Public Works Department to help fund additional recycling and diversion efforts to mitigate the increase in Kern Unincorporated disposal tonnage. Payment will be due to the Kern County Public Works Department at the end of each quarter based on the residual disposed of from the composting operation as reported to the State of California.</p>	
Impact 4.17-5: The project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts: The proposed project would not make a cumulative contribution to impacts to utilities and service systems in conjunction with past present and reasonably foreseeable projects. The geographic scope for cumulative impacts	Potentially significant	Implementation of Mitigation Measures MM 4.17-1 through MM 4.17-2 as discussed, above.	Less than significant

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>to utilities and service systems includes closely related projects such as a similar project approximately 8 miles to the north. Considered with these other projects, the proposed project would not substantially increase the demand for water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities services such that new or expanded facilities resulting in impacts to the environmental would occur. Further, the project would help to divert additional organic waste from existing landfills, thereby reducing the total volume of waste likely to be stored in regional landfills. MM 4.17-1 further requires that debris and waste generated shall be recycled MM 4.17-2 would ensure the applicable payment provisions and reporting procedures would ensure that project demand does not exceed the existing capacity of solid waste facilities. Thus, the project itself would not make a substantial contribution to utility demands, and impacts would be less than significant at the cumulative level.</p>			
Wildfire			
<p>Impact 4.18-1: The Project Would Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan.</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>
<p>Impact 4.18-2: The Project Would Due to Slope, Prevailing Winds, and Other Factors, Exacerbate Wildfire Risks, and</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Thereby Expose Project Occupants to, Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire.			
Impact 4.18-3: The Project Would Require the Installation or Maintenance of Associated Infrastructure (Such As Roads, Fuel Breaks, Emergency Water Sources, Power Lines or Other Utilities) That May Exacerbate Fire Risk or That May Result In Temporary or Ongoing Impacts to The Environment.	No Impact	No mitigation measures are required.	No Impact
Impact 4.18-4: The Project Would Expose People or Structures to Significant Risks, Including Downslope or Downstream Flooding or Landslides, as a Result of Runoff, Post-Fire Slope Instability, or Drainage Changes.:	No impact	No mitigation measures are required.	No impact
Cumulative Impacts: The proposed project would not result in be cumulatively considerable impacts in conjunction with past, present, and reasonably foreseeable projects in regard to wildfire. There are no other projects in the immediate vicinity that would combine with the proposed project to exacerbate wildfires or increase the potential effects of such an event. The surrounding uses include agricultural development, farming activities, rural roadways, scattered rural residences, as well as a solar facility and petroleum facility. The surrounding areas are generally classified agricultural, non-wildland and the overall risk for these areas as well as the project site to experience a	No impact	No mitigation measures are required.	No impact

Table 1-5: Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>wildfire is remote. No lands in this area are classified as being within Moderate, High, or Very High hazard severity zone. The proposed project also would not interfere with the implementation of an adopted emergency response plans or hinder any emergency evacuation by itself or in consideration of any other use, likely project, or designated land uses. Similar to the proposed project, other projects may require associated infrastructure such as roads, fuel breaks, water sources, or power lines. In addition, all projects would be reviewed by Kern County, as Lead Agency, for land use and zoning consistency and compliance with applicable requirements and analyzed for environmental impacts related to wildfire risk. Thus, project related cumulative impacts associated with wildfire would be less than significant.</p>			

1.10 Summary of Adopted Mitigation Measures for the South Kern Industrial Center Composting Facility SEIR

The final Mitigation Monitoring and Reporting Program (MMMP) prepared for the existing South Kern Industrial Center Composting Facility is provided in **Table 1-6, *Adopted MMMP – South Kern Industrial Center Composting Facility Project***, below. **Table 1-6** is a summary of the adopted mitigation measures and steps to compliance that have been previously implemented for the original project.

Table 1-6: Adopted MMMP – South Kern Industrial Center Composting Facility Project

General Plan Amendment Case No. 4, Map No. 158; Conditional Use Permit No. 2, Map No. 158 SCH# 1991122017

Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
1.	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): All structural engineering design for any applicable structures within the SKIC Specific Plan area shall be required to account for the possibility of strong ground motion and possible surface readjustment on the property at some time in the future from movement long the San Andreas, White Wolf, Pleito, or Garlock faults, or any of the other large faults in the general project area.</p> <p>Structure and foundations shall be designed with consideration of the potential hazards related to ground-shaking as outlined in the Geologic Hazards Investigation for the South Kern Industrial Center. Design Criteria as required for Seismic Risk Zone No. 4 shall be incorporated in the structural planning of all buildings.</p> <p>Justification (from 1992 Final Environmental Impact Report): If a maximum probable earthquake occurred along the San Andreas fault, located approximately 15 miles from the project area, a peak horizontal acceleration of about .37 gravity might be expected at the property. Ground-shaking could be as high as IX on the Modified-Mercalli intensity scale. Damage related to an earthquake of this magnitude could include the following: serious damage to most masonry structures; frame structures, if not bolted, could be shifted off foundations; frames cracked; underground pipes broken; and possible liquefaction effects. Substantial Damage and casualties in an event can be associated with falling building elements, unsecured material, toppling furniture, falling shelving, and broken glass windows.</p>	N/A	<p>Kern County Planning Department; Kern County Engineering and Surveying Services Department/Building Inspection Division</p> <p>Steps to Compliance:</p> <p>A. All applications for building permits shall incorporate design criteria as required for Seismic Risk Zone No. 4.</p> <p>B. All applications for building permits shall be reviewed by the Engineering and Survey Services Department/Building Inspection Division.</p> <p>C. Project applicants shall provide proof of Engineering and Survey Services Department/Building Inspection Division review and compliance with any requirements thereof to the Planning Department.</p>
2.	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): Construction activities shall be discontinued during first stage smog alerts.</p>	N/A	<p>San Joaquin Valley Unified Air Pollution Control District; Kern County Engineering and Survey Services</p>

Table 1-6: Adopted MMMP – South Kern Industrial Center Composting Facility Project

General Plan Amendment Case No. 4, Map No. 158; Conditional Use Permit No. 2, Map No. 158 SCH# 1991122017			
Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	<p>Construction and grading activities shall not be allowed during first stage ozone alerts. First stage ozone alerts are declared when the ozone level exceeds .20 ppm (1-hour average).</p> <p>Justification (from 1992 Final Environmental Impact Report): The operations of heavy-duty, diesel powered construction equipment would generate significant exhaust emissions, adding to the emissions inventory on a local scale in the short-term. Fugitive dust would be generated by grading and construction operations associated with project area development activities in the short-term as well. These impacts would be intensified during periods of first stage smog alerts and first stage ozone alerts.</p>		<p>Department/Building Inspection Division; Kern County Planning Department</p>
		<p>Steps to Compliance:</p> <p>A. All construction working within the plan area shall check periodically with the San Joaquin Valley Unified Air Pollution Control District to ascertain if a first stage smog and/or ozone alert has been declared.</p> <p>B. Upon declaration of a first stage smog and/or ozone alert, contractors shall cease work and shall notify the Engineering and Survey Services Department/Building Inspection Division and the Planning Department of such cessation.</p>	
3.	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): A Transportation Management Agency (TMA) shall be established to serve plan area businesses. The TMA shall provide vanpool service to the areas which contain the most concentrated numbers of plan area employees. The TMA shall publicize and encourage carpooling/vanpooling, update match lists, introduce prospective rideshare participants, and generally assist employees in forming and maintaining rideshare participants, and generally assist employees in forming and maintaining ridesharing arrangements. In addition, employees shall offer incentives to carpool/vanpoolers with the closest, most convenient parking spaces in large lots, direct cash payments to qualifying participants, accrual of one “bonus” vacation day for every 100 workdays in a carpool/vanpool, and company discounts for various goods and services.</p>	N/A	<p>Kern County Roads Department; Kern County Planning Department</p>
	<p>Justification (from 1992 Final Environmental Impact Report): Due to the increase in vehicular emissions by project area workers and freight trucks serving project businesses, indirect sources of air pollution generated by the project would result in a substantial increase in the inventory of air pollutants on a local scale in the long-term.</p>	<p>Steps to Compliance:</p> <p>A. Transportation Management Agency (TMA) or other entity acceptable to the County shall be formed by the</p>	

Table 1-6: Adopted MMMP – South Kern Industrial Center Composting Facility Project

General Plan Amendment Case No. 4, Map No. 158; Conditional Use Permit No. 2, Map No. 158 SCH# 1991122017

Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	The establishment of a variable carpool/vanpool program for project area employees would reduce the number of vehicle trips added to the local project vicinity, thereby minimizing the air quality impacts of the project on the local environment.	landowner, successors, or assigned when total plan area employment exceeds 100 persons and shall be considered part of the specific plan implementation.	B. Evidence of such formation shall be provided by the landowner, successors, or assigns to the Planning Department.
4.	Mitigation Measure (from 1992 Final Environmental Impact Report): All internal combustion engines driven equipment should be properly maintained and well tuned according to manufacturer’s specifications.	N/A	San Joaquin Valley Unified Air Pollution Control District
	Justification (from 1992 Final Environmental Impact Report): The operation of heavy-duty, diesel powered construction equipment may generate excessive exhaust emissions, adding to the emission inventory on a local scale.	Steps to Compliance: A. The San Joaquin Valley Unified Air Pollution District may periodically inspect construction equipment utilized on the project site for proper operation and excessive emissions.	
5.	Mitigation Measure (from 1992 Final Environmental Impact Report): Construction during nighttime hours shall be minimized. Kit foxes are more active and, therefore, more vulnerable to vehicle or equipment-induced injury during nighttime hours.	State Department of Fish and Game	Kern County Roads Department
	Justification (from 1992 Final Environmental Impact Report): The operation of construction equipment on the project site and increased vehicular traffic in the project area vicinity would potentially result in increased harm to rare and endangered wildlife species. San Joaquin kit foxes are known to exist in the vicinity of the project site and would be susceptible to harm related to the increased vehicular activity generated by the project. Tipton kangaroo rats may exist in the vicinity of the project site.	Steps to Compliance: A. Adequate signage shall be erected within street rights-of-way informing travelers of the existence of sensitive wildlife in the project vicinity. Plan area developers shall install these warning signs at no expense to the County of Kern and shall obtain an encroachment permit for these signs from the Kern County Roads Department.	

Table 1-6: Adopted MMMP – South Kern Industrial Center Composting Facility Project

General Plan Amendment Case No. 4, Map No. 158; Conditional Use Permit No. 2, Map No. 158 SCH# 1991122017

Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
6.	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): All future employees of the project area shall be notified of the occurrence of the San Joaquin kit fox and Tipton kangaroo rat within the general project area. Employees shall also be notified to exercise caution when commuting to the project site in order to avoid harm to these and other wildlife species.</p>	State Department of Fish and Game	Kern County Engineering and Survey Services Department/Building Inspection Division
	<p>Justification (from 1992 Final Environmental Impact Report): Increased vehicular traffic in the project area vicinity would potentially result in increased harm to rare and endangered wildlife species. San Joaquin kit foxes are known to exist in the vicinity of the project site and would be susceptible to harm related to the increased vehicular activity generated by the project. Tipton kangaroo rats may exist in the vicinity of the project site.</p>	<p>Steps to Compliance:</p> <p>A. Plan area businesses shall be required to post notices in conspicuous work areas informing employees of the presence of rare and endangered wildlife species in the plan area vicinity. Notices shall include illustration or photographs of any rare and endangered wildlife species that are known to be present in the vicinity. Notices shall be posted prior to the issuance of a Certificate of Occupancy.</p> <p>B. Engineering and Survey Services/Building Inspection Division will periodically spot check businesses for posting of notices.</p>	
7.	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): Project area business and site developers shall ensure that refuse contractors remove trash at regular intervals. Project rea businesses shall be required to contain all trash on-site in appropriate trash receptacles to reduce attractiveness to San Joaquin kit foxes that may irregularly forage in this area.</p>	State Department of Fish and Game	Kern County Engineering and Survey Services Department/Building Inspection Division
	<p>Justification (from 1992 Final Environmental Impact Report): Increased vulnerability of some wildlife to predators may occur as a result of the consistent availability of project-generated trash. These conditions may increase the risk of potentially harming rare and endangered wildlife species.</p>	<p>Steps to Compliance</p> <p>A. Plan area businesses shall provide proof of regular refuse collection service to the Engineering and</p>	

Table 1-6: Adopted MMMP – South Kern Industrial Center Composting Facility Project

General Plan Amendment Case No. 4, Map No. 158; Conditional Use Permit No. 2, Map No. 158 SCH# 1991122017

Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
		Survey Services Department prior to the issuance of a Certificate of Occupancy.	
8.	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): Within 14 days prior to the commencement of grading, other site improvements, or construction of the first development project within each identified phase area of the specific plan area, the project site shall be resurveyed for kit fox dens and potential dens by a qualified biologist. Subsequent development within the same phase area shall not require resurveying for kit fox dens and potential dens. Such sites shall be prominently “flagged” reduce any likelihood of their inadvertent destruction during construction activities. Confirmed kit fox dens shall be protected if possible. Buffer distances around denning sites shall be established as follows:</p> <p>Potential Kit fox dens: 50 feet Known kit fox den: 100 feet Kit fox pupping den: 150 feet</p> <p>Construction activities within these buffer zones shall be limited to vehicle operation on existing roads and simple foot traffic. If destruction of a kit fox den is considered to be unavoidable, the U.S. Fish and Wildlife Service and the State of California Department of Fish and Game shall be contacted or guidance prior to ground disturbing activities in or near the den. Each agency may concur or may recommend alternate methods to reduce impacts to the den. With concurrence from these agencies, the subject den shall be carefully excavated either by a qualified biologist or under the direct supervisions of a qualified biologist to ensure that no animals are trapped or injured. Any kit foxes in residence shall be allowed to escape unimpeded. The unoccupied den shall then be completely destroyed to discourage any foxes from returning to the site. Den destruction shall be monitored then be completely destroyed to discourage any foxes from returning to the site. Den destruction shall be monitored</p>	State Department of Fish and Game	Kern County Planning Department; U.S. Fish and Wildlife Service

Table 1-6: Adopted MMMP – South Kern Industrial Center Composting Facility Project

General Plan Amendment Case No. 4, Map No. 158; Conditional Use Permit No. 2, Map No. 158 SCH# 1991122017

Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	by a qualified biologist. Potential den sites shall be excavated using these same procedures.		
	<p>Justification (from 1992 Final Environmental Impact Report): Activities related to the construction and operation of the project would result in potential impacts to rare and endangered wildlife species.</p>	<p>Steps to Compliance</p> <p>A. Within 14 days prior to commencement of grading, other site improvements, or construction of the first development project within each identified phase area of the specific plan area, the developer shall submit a letter to the Planning Department prepared by a qualified biologist stating that the specific development site has been resurveyed for kit fox dens and potential dens. The letter shall also include the findings and recommendations of the survey. Subsequent developments within the same phase area shall not require resurveying for kit fox dens and potential dens.</p> <p>B. The Department of Planning and Development Services shall ensure that all appropriate actions be taken in the event that a kit fox den or potential den has been identified during the resurvey. The Department of Planning and Development Services shall consult with the U.S. Fish and Wildlife Service and the State Department of Fish and Game if the destruction of a kit fox den is considered to be unavoidable.</p>	

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
9.	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): All equipment storage and parking during facility construction shall be confined to the construction site or to previously disturbed off-site that are not habitat for listed species.</p> <p>To prevent entrapment of endangered species or other wildlife species during any pipeline construction escape ramps (consisting of loose earth deposited in the trench or pit or wooden planks) shall be erected by the project contractor to facilitate escape by any wildlife species that inadvertently fall into the open trench or pit. Trenches or pits shall also be inspected for entrapped wildlife each morning prior to the onset of construction activities and immediately prior to the end of each construction work day. Before filling open trenches and pits, the project contractor shall closely inspect these areas for entrapped animals. Any animal discovered shall be allowed to escape before construction activities resume, or be moved from the open trench or pit by a qualified biologist and allowed to escape unimpeded.</p> <p>The infrastructural and mechanical improvements relating to the specific activities within the project area shall be carefully designed so as to avoid the inadvertent trapping of wildlife. Any pipe segments with diameters of four or more inches shall be taped closed.</p>	State Department of Fish and Game	Kern County Engineering and Survey Services Department
	<p>Justification (from 1992 Final Environmental Impact Report): Activities related to the construction and operation of the project would result in potential impacts to rare and endangered wildlife species.</p>	<p>Steps to Compliance</p> <p>A. Engineering and Survey Services Department/Building Inspection Division staff shall ensure that escape ramps are continuously in place during the periodic construction inspection activities. Trenches or pits shall be inspected by construction supervisors for entrapped wildlife each morning prior to the onset of construction activities and</p>	

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
		<p>immediately prior to the end of each construction work day. Before filling open trenches and pits, the project contractor shall closely inspect these areas for entrapped animals. Any animals discovered shall be allowed to escape before construction activities resume, or be moved from the open trench or pit by a qualified biologist and allowed to escape unimpeded.</p> <p>B. Engineering and Survey Services Department/Building Inspection Division staff shall ensure that all infrastructural and mechanical improvements are designed so as to avoid inadvertent trapping of wildlife. Any pipe segments with diameters of four or more inches shall be taped closed. Such pipe segments shall be regularly inspected by construction supervisors for kit fox use prior to closure by welding to ensure that kit foxes are not inadvertently trapped.</p>	
10.	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): Any future rodent control programs which are initiated by project area developers and businesses shall be undertaken in consultation with the California Department of Fish and Game and the U.S. Fish and Wildlife Service in order to prevent harm to listed wildlife species that may occur in the site vicinity.</p>	State Department of Fish and Game	Kern County Planning Department
	<p>Justification (from 1992 Final Environmental Impact Report): Consultation with the State Department of Fish and Game and the U.S. Fish and Wildlife Service prior to the implementation of rodent control programs will ensure the protection of sensitive wildlife species in the vicinity of the plan area.</p>	<p>Steps to Compliance</p> <p>A. Plan area developers or business owners planning to implement a rodent control program shall submit copies of response letters from the State Department</p>	

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
		<p>of Fish and Game and the U.S. Fish and Wildlife Service to the Planning Department prior to the commencement of the program.</p> <p>B. The Planning Department shall ensure that all recommendations of the State Department of Fish and Game and the U.S. Fish and Wildlife Service related to proposed rodent control programs within the plan area are followed by developers/business owners.</p>	
<p>11.</p>	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): The California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) shall be provided an opportunity to review and comment on any proposed development of the project area prior to the project approval. All requirements pursuant to Section 2081 of the Fish and Game Code and the Endangered Species Act shall be adhered to.</p>	<p>State Department of Fish and Game; State Land Commission; State Department of Parks and Recreation; California State University, Bakersfield</p>	<p>Kern County Planning Department; U.S. Fish and Wildlife Service</p>
	<p>Justification (from 1992 Final Environmental Impact Report): Activities related to the construction and operation of the project would result in potential impacts to rare and endangered wildlife species.</p>	<p>Steps to Compliance</p> <p>A. Plan area developers shall submit proof of their project consultation with the State Department of Fish and Game and the U.S. Fish and Wildlife Service to the Planning Department, including response letters from these agencies, prior to the issuance of building permits.</p> <p>B. The Planning Department shall ensure that all requirements of the State Department of Fish and Game and U.S. Fish and Wildlife Service, pursuant to Section 2081 of the Fish and Game Code and the</p>	

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
		Endangered Species Act, are adhered to by plan area developers.	
12.	Mitigation Measure (from 1992 Final Environmental Impact Report): The landowners, successors, or assigned shall be responsible for upgrading automatic protection at the Sunset Railroad Crossing in accordance with Standard No. 9-A of the Public Utilities Commission General Order, if required by the Public Utilities Commission.	N/A	Kern County Roads Department
	Justification (from 1992 Final Environmental Impact Report): Potential traffic hazards may result due to the increase in vehicular traffic generated by the project.	Steps to Compliance A. The landowners, successors, or assigns shall be responsible for upgrading automatic protection at the Sunset Railroad Crossing in accordance with Standard No. 9-A of the Public Utilities Commission General Orders, if required by the Public Utilities Commission. B. If prior to occupancy, the landowners, successors, or assigned have not completed all work at the Sunset Railroad Crossing, if required by the Public Utilities Commission, and have done everything in their power to accomplish this goal, then the landowners, successors, or assigned shall enter into an agreement with the County to assure completion of the required improvements.	
13.	Mitigation Measure (from 1992 Final Environmental Impact Report): The industrial users within the SKIC Project shall prepare and maintain an emergency procedures manual to be in effect at all times. The preparers of the manual shall coordinate with local hospitals and private emergency medical service providers.	N/A	Kern County Planning Department

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	<p>Justification (from 1992 Final Environmental Impact Report): Industrial-related accidents and injuries may occur at the industrial sites, requiring emergency services to the project site and treatment at area medical facilities. The implementation of the mitigation measure would help to ensure that adequate emergency procedures and coordination with medical services entities are established to minimize the adverse effects of</p>	<p>Steps to Compliance</p>	<p>A. Plan area industrial users shall submit a copy of their emergency procedures manual to the Planning Department prior to the issuance of a Certificate of Occupancy.</p>
<p>14.</p>	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): All developers within the SKIC project area shall incorporate energy-conservation measures in the planning and construction of their proposed sites. Measures shall include, but shall not be limited to, the following: the use of low-sodium lighting fixtures for the parking areas and building exteriors; the use of fluorescent lighting fixtures; and efficient HVAC systems as part of the final building plan approved.</p>		<p>Kern County Engineering and Survey Services Department/Building Inspection Division; Kern County Planning Department</p>
	<p>Justification (from 1992 Final Environmental Impact Report): Implementation of the mitigation measures would reduce potential wasteful uses of fuel and energy within the project area.</p>	<p>Steps to Compliance</p>	<p>A. Plan area developers shall submit development plans to the Engineering and Survey Services Department/Building Inspection Division during the site plan review process for review of energy conservation measures.</p> <p>B. The Planning Department shall ensure that all proposed developments are consistent with the requirements of the Engineering and Survey Services Department/Building Inspection Division.</p>
<p>15.</p>	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): In compliance with Section 10.2 (Storage Regulations) of the County Hazardous Waste Management Plan, new businesses that handle hazardous materials shall be required to prepare and submit a Business Plan (or Hazardous Materials Management Plan) to the Kern County Environmental Health Services Department and the Kern County Fire Department that</p>	<p>N/A</p>	<p>Kern County Environmental Health Services Department; Kern County Fire Department;</p>

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	<p>details hazards inventories, facility layouts, training and monitoring procedures, and emergency response plans, all in conformance with State Law.</p> <p>All project area businesses will be required to properly handle all hazardous materials. New businesses that handle enough hazardous materials to generate wastes in reportable quantities (12,000 kilograms of hazardous waste per year or 12 kg of extremely hazardous waste per year) shall be required to have an approved Hazardous Waste Source Reduction Evaluation and Review Plan on file. All qualifying new industries shall prepare such plans and submit them by September 1st following the start-up of business operations.</p>		<p>Kern County Planning Department</p>
	<p>Justification (from 1992 Final Environmental Impact Report): Project area industrial users would potentially handle hazardous materials that may pose a threat to public health or safety. Kern County has set forth its hazardous materials goals and policies in the County’s hazardous Waste Management Plan. County policies are designed to protect the health and welfare of residents through management and regulation of hazardous materials and wastes. The policies call for proper storage and disposal of hazardous wastes and materials, and endorse Federal, State, and local laws and regulations that strengthen safety requirements for hazardous wastes and materials.</p> <p>The State of California has taken steps to reduce commercial hazardous waste generation by passage of the Hazardous Waste Source Reduction and Management Review Act of 1989 (SB 14). Hazardous waste generators will meet the goals of SB 14 by preparing source reduction evaluation plans and hazardous waste management performance reports. New businesses in the project area would be required to comply with provisions of SB 14, as applicable, to minimize commercial waste generation.</p>	<p>Steps to Compliance</p>	<p>A. New businesses that handle hazardous materials shall prepare and submit a Business Plan (or Hazardous Materials Management Plan) to the Environmental Health Services Department and the Fire Department concurrently with the application for a building permit that details hazards inventories, facility layouts, training and monitoring procedures, and emergency response plans, all in conformance with State law. Documentation of the approval of this plan shall be submitted to the Planning Department prior to the start-up of business operations for applicable businesses.</p> <p>B. New businesses that handle enough hazardous materials to generate wastes in reportable quantities (12,000 kilograms of hazardous waste per year or 12 kg of extremely hazardous waste per year) shall have</p>

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
		an approved Hazardous Waste Source Reduction Evaluation and Review Plan on file. All qualifying new industries shall prepare such plans and submit them to the Environmental Health Services Department by September 1 st of the following start-up of business operations.	
16.	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): If pesticide contamination, underground storage tanks, abandoned drums, or other hazardous materials or wastes are uncovered in the project area during grading or construction activities, then the County shall be notified. If the site is identified by the Kern County Planning Department as a potential hazardous site, then a Phase 1 Site Study shall be performed by a qualified consultant and submitted to the Planning Department by the project applicant. If any of the aforementioned hazardous substances are found on the project site, then a site remediation plan shall be prepared by the project applicant that would (1) specify measures to be taken to protect workers and the public from exposure to potential site hazards and (2) certify that the proposed remediation measures would clean up the wastes, dispose the wastes, and protect public health in accordance with federal, state, and local requirements. Permitting or work in the areas of potential hazard shall not proceed until the site remediation plan is on file with the County. In accordance with OSHA requirements, any activity performed at a contaminated site shall be preceded by preparation of a separate site health and safety plan (prepared by the project applicant and filed with the County) for the protection of workers and the public.</p> <p>The landowners, successors, or assigns shall employ licensed brokers or registered hazardous waste treatment engineers to handle its contaminated soil disposal needs, if any exist.</p>	N/A	Kern County Environmental Health Services Department; Kern County Engineering and Survey Services Department

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	<p>Justification (from 1992 Final Environmental Impact Report): During the development of the project area, contaminated soil or groundwater could be encountered. The most likely environmental impairment would be petroleum contamination from fuel leaks or spills, or pesticide contamination from agricultural or greenhouse activities.</p> <p>It is possible that old or abandoned underground storage tanks are present in the project area. The contents of USTs may be hazardous; a previously unknown UST, uncovered or disturbed during excavation, could threaten the health and safety of site workers. A leaking UST could pose additional threats to groundwater resources and the environment, and could also pose a possible explosion hazard as well.</p>	<p>Steps to Compliance</p> <p>A. If any site inspections performed for the individual project sites to be developed uncover pesticide contamination, underground storage tanks, abandoned drums, or other hazardous materials or wastes in the project area, the inspection report preparer shall notify the Environmental Health Services Department. Permitting or work in the areas of potential hazard shall not proceed until the site remediation plan is on file with the Environmental Health Services Department. In accordance with OSHA requirements, any activity performed at a contaminated site shall be preceded by preparation of a separate site health and safety plan (prepared by the project applicant and filed with the Environmental Health Services Department).</p>	
17.	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): All business generating large quantities of hazardous waste to be transported to and from the facility shall contact the State Toxic Substances Control Department for instructions for the safe and practical transport of these materials prior to any movement of such materials. If appropriate, the Toxic Substances Control Department may require the submittal and approval of a hazardous material transportation plan for the business. The plan should include either (1) specific routes to be used for transport or hazardous materials and wastes to and from the facility, or (2) specific routes to be avoided during transport of hazardous materials and wastes to and from the facility. Selected routes generally minimize proximity to sensitive receptors to the greatest practical degree.</p>	N/A	State Toxic Substances Control Department

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	<p>Justification (from 1992 Final Environmental Impact Report): Increased traffic volumes and movement of hazardous materials associated with the project may result in accidents involving hazardous substances. The number and severity of hazardous materials incidents on highways and streets might increase due to an increased number of commercial vehicles serving the project area.</p>		<p>Steps to Compliance A. All plan area businesses generating large quantities of hazardous waste to be transported to and from the facility shall contact the State Toxic Substances Control Department for instructions for the safe and practical transport of these materials prior to any movement of such materials. If appropriate, the Toxic Substances Control Department may require the submittal and approval of a hazardous material transportation plan for the business.</p>
<p>18.</p>	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): Applicants for development projects which abut agricultural lands shall reduce the potential for spray drift impacts associated with the aerial spraying of pesticides by establishing a 300-foot buffer zone between structures proposed for human use and the plan area boundary, or through an alternative measure acceptable to the owner of the abutting agricultural property. Examples of alternative measures which may be acceptable include, but shall not be limited to, the following:</p>	<p>N/A</p>	<p>Kern County Planning Department; Kern County Agricultural Commissioner’s Office</p>
	<p>Justification (from 1992 Final Environmental Impact Report): Aerial spraying of pesticides at adjacent agricultural properties could expose project occupants to hazardous materials. Wind-borne drift of aerial chemical spray could result in toxic effects to project occupants.</p>		<p>Steps to Compliance A. For plan area parcels which abut agricultural land uses, a 300-foot setback between the plan area boundary and structures proposed for human use, or an alternative measure acceptable to the owner of the abutting agricultural property and approved by the Kern County Agricultural Commissioner’s Office and the Kern County Planning Department, shall be required.</p>

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
19.	<p>Mitigation Measure (from 1992 Final Environmental Impact Report): Project area businesses shall warn employees about the possible exposure to agricultural chemicals. Warnings would include copies of Material Safety Data Sheets on agricultural chemicals regularly used in the area and the possible length and extent of exposure to each material.</p>	N/A	Kern County Planning Department; State Department of Food and Agriculture
	<p>Justification (from 1992 Final Environmental Impact Report): The use of agricultural chemicals at adjacent properties could expose project occupants to hazardous materials. Wind-borne drift of aerial chemical spray could result in toxic effects to project occupants should it be blown into the project area.</p>	<p>Steps to Compliance</p> <p>A. A health procedures and safety plan for each major business shall be submitted and approved by the Department of Food and Agriculture. The approved safety plan shall be submitted to the Planning Department prior to the issuance of a Certificate of Compliance.</p>	
20.	<p>Mitigation Measure (from Supplement to the Environmental Impact Report): Prior to commencement of operations, the operator of the organic waste recycling facility shall install and maintain an automated weather station within one mile of the facility or as approved by Kern County Environmental Health Services Department to track atmospheric conditions for the purpose of odor control and compost management.</p>	N/A	Kern County Environmental Health Services Department; Kern County Planning Department
	<p>Justification (from Supplement to the Environmental Impact Report): Low wind and cool air inversions occur during late evening and early morning hours. This condition could create conditions which would increase odor impacts. The inversion layer could effect compost pile temperature. Manage of compost pile temperature is a critical process component.</p>	<p>Steps to Compliance</p> <p>A. At the time of processing any C.U.P. for the proposed Organic Waste Recycling Facility, this mitigation measure shall be included as condition of approval.</p> <p>B. Prior to commencement of operations, operator shall provide proof to the Planning Department of review and approval by the Environmental Health Services Department for the location of the weather station.</p>	

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		C. Prior to commencement of operations, the operator of the Organic Recycling Facility shall install the weather station and the Building Inspector shall verify this installation.	
21.	<p>Mitigation Measure (from Supplement to the Environmental Impact Report): Prior to issuance of building permits, construction plans for the organic recycling facility shall incorporate the recommendations found in the “Geotechnical Engineering Investigation and Soil Absorption Evaluation” prepared for the project by Krazan & Associates to minimize hazards arising from the potential soil liquefaction.</p> <p>Foundations and structures shall be designed with consideration of the potential hazards related to liquefaction as outlined in the Geotechnical Engineering Investigation.</p>	N/A	Kern County Engineering and Survey Services, Building Inspection Division; Kern County Planning Department
	<p>Justification (from Supplement to the Environmental Impact Report): If an earthquake occurred along the White Wolf fault, located approximately 14 miles from the project area, a peak horizontal acceleration as high as a 0.25 gravity might be expected at the project. Shallow groundwater has been identified in the project area. In the event of an earthquake, ground-shaking in areas with a shallow water table could result in liquefaction.</p>	<p>Steps to Compliance</p> <p>A. At the time of processing any C.U.P. for the proposed Organic Waste Recycling Facility, this mitigation measure shall be included as a condition of approval.</p> <p>B. Design of Organic Waste Recycling Facility shall incorporate Krazan report recommendations.</p> <p>C. At the time of zoning approval, the Planning Department staff shall attach the Krazan report to the plans.</p>	
22.	<p>Mitigation Measure (from Supplement to the Environmental Impact Report): Prior to issuance of building and grading permits, construction plans for the organic recycling facility shall incorporate the recommendations found in the “Geotechnical Engineering Investigation and Soil Absorption Evaluation,” prepared for the project by Krazan &</p>	N/A	Kern County Engineering and Survey Services/Building Inspection Division; Kern

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	Associates to minimize hazards arising from potential unstable soil, lateral spreading, subsidence and collapse.		County Planning Department
	Justification (from Supplement to the Environmental Impact Report): Shallow groundwater, subsidence and expansive soils have been identified in the project area. Property damage, infrastructure breaking/cracking and settlement may occur as a result of building on the soil types identified, causing hazards to human life and property.		Steps to Compliance A. At the time of processing any C.U.P. for the proposed Organic Waste Recycling Facility, this mitigation measure shall be included as a condition of approval. B. Design of the Organic Waste Recycling Facility shall incorporate Krazan report recommendations. C. At the time of zoning approval, the Planning Department staff shall attach the Krazan report to the plans.
23.	Mitigation Measure (from Supplement to the Environmental Impact Report): Prior to the issuance of a permit to construct a septic system, an engineered septic system design shall be submitted to the Kern County Environmental Health Services Department for review. The design shall adequately address and mitigate the issue of shallow groundwater and septic installation within Flood Zone A, and incorporate the recommendations included in the “Field Exploration and Sewage Disposal Feasibility Investigation,” dated July 31, 2001 prepared by Krazan and Associates. A dry sewer shall also be installed in order to facilitate the community system, once it is constructed.	N/A	Kern County Planning Department; Kern County Environmental Health Services
	Justification (from Supplement to the Environmental Impact Report): The project site lies within a FEMA designated Flood Zone A. Shallow groundwater has been identified in the project area. Property damage, infrastructure breaking/cracking and groundwater contamination may occur as a result, causing hazards to human life and property.		Steps to Compliance A. At the time of processing any CUP for the Organic Waste Recycling Facility, this mitigation measure shall be included as a condition of approval. B. Prior to making application for permits for septic systems for any SKIC project area, the applicant shall

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
		<p>submit design and facility requirements to the Environmental Health Services Department for review and approval. Prior to final approval of the septic systems by the Engineering and Survey Services Department/Building Inspection Division, engineered plans shall be submitted and approved by the Environmental Health Services Department.</p> <p>C. At the time of zoning approval, the Planning Department shall attach the Krazan report to the plans.</p> <p>D. Prior to commencement of operations, the applicant shall obtain a permit for and install the dry sewer for future connection to the wastewater treatment facility.</p> <p>E. All applications for building permits shall incorporate design criteria as required for Flood Zone A.</p>	
24.	<p>Mitigation Measure (from Supplement to the Environmental Impact Report): Prior to commencement of operations, the applicant shall request the Kern Roads Department to post speed limit signs for all established roadways. Appropriate speeds shall be set for all future established roadways.</p>	N/A	Kern County Planning Department; Kern County Roads Department
	<p>Justification (from Supplement to the Environmental Impact Report): Due to the increase in vehicular emissions generated by project area workers and freight trucks serving project businesses, indirect sources generated by the project would result in a substantial increase in the inventory of air pollutants on a local scale in the long-term. The establishment of appropriate speed limits would reduce the amount of pollutants, thereby minimizing the air quality impacts of the project on the local environment.</p>	<p>Steps to Compliance</p> <p>A. At the time of processing any CUP for the Organic Waste Recycling Facility, this mitigation measure shall be included as a condition of approval.</p> <p>B. Prior to commencement of operations, the applicant shall submit to the Planning Department, a copy of</p>	

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
		written request made to the Roads Department for posting of signs. C. Prior to commencement of operations, signs shall be installed and the applicant shall request the Roads Department to notify the Planning Department of completion.	
25.	Mitigation Measure (from Supplement to the Environmental Impact Report): Prior to issuance of grading or building permits, project applicants shall provide on-site secured parking areas for construction equipment and personnel.	N/A	Kern County Planning Department; Kern County Engineering and Survey Services/Building Inspection Division
	Justification (from Supplement to the Environmental Impact Report): Due to the increase in vehicular emissions generated by the project would result in a substantial increase in the inventory of air pollutants on a local scale in the short-term. The establishment of a secured parking area would eliminate the need to transport equipment on a daily basis and would reduce the amount of pollutants, thereby minimizing the air quality impacts of the project on the local environment in the short-term.	Steps to Compliance A. Construction contracts shall specify that contractors store equipment within the specified secure area and that penalties will be included for non-compliance. Verification to be submitted to the Planning Department when contracts are signed. B. Secured parking areas shall be shown on the site plan submitted with the permit plans. C. Building Inspection shall inspect project construction sites to ensure secured parking areas are maintained during construction.	
26.	Mitigation Measure (from Supplement to the Environmental Impact Report): Project operators shall provide employee subsidies at existing child-care facilities in Bakersfield and Taft, which would provide vanpool “park and ride” starting points.	N/A	Kern County Planning Department

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	<p>Justification (from Supplement to the Environmental Impact Report): Due to the increase in vehicular emissions generated by project area workers, indirect sources generated by the project would result in a substantial increase in the inventory of air pollutants on a local scale in the long-term. The establishment of a viable carpool/vanpool incentive program for project area employees would reduce the amount of pollutants, thereby minimizing the air quality impacts of the project on the local environment in the long-term.</p>	<p>Steps to Compliance</p> <p>A. Lease/sales agreements with future site occupants shall specify this mitigation measure. Penalties for non-compliance shall be specified in the lease/contract agreements. Verification shall be submitted to the Planning Department when a lease/contract is signed.</p> <p>B. Lease/sales agreements with future site occupants shall specify that operators/developers shall provide a survey to employees to determine if enough participants are available. Verification shall be submitted to the Planning Department when a lease/contract is signed.</p>	
<p>27.</p>	<p>Mitigation Measure (from Supplement to the Environmental Impact Report): All operating equipment, processing equipment, and trucks operating within the Specific Plan boundaries should be equipped with the appropriate EPA approved Tier I or Tier III model year engines, when such equipment is available.</p>	<p>N/A</p>	<p>San Joaquin Valley Unified Air Pollution Control District; Kern County Planning Department</p>
	<p>Justification (from Supplement to the Environmental Impact Report): The operation of heavy-duty, diesel powered construction equipment may generate excessive exhaust emissions, adding to the emissions inventory on a local scale.</p>	<p>Steps to Compliance</p> <p>A. Contractor agreements shall specify this mitigation measure. Compliance may consist of demonstrating that such equipment is unavailable. Penalties for non-compliance to be specified in contract documents. Verification of the contract language shall be submitted to the Planning Department.</p>	

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Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
		B. The San Joaquin Valley Unified Air Pollution District may periodically inspect construction equipment utilized on the project site for proper operation and excessive emissions.	
28.	Mitigation Measure (from Supplement to the Environmental Impact Report): Contractors and operators shall be required to limit engine idling time to 15 minutes on all construction/earth moving equipment, processing equipment, and trucks operating within the Specific Plan boundaries.	N/A	San Joaquin Valley Unified Air Pollution Control District; Kern County Planning Department
	Justification (from Supplement to the Environmental Impact Report): The operation of heavy-duty, diesel powered construction equipment may generate excessive exhaust emissions, adding to the emissions inventory on a local scale.	<p>Steps to Compliance</p> <p>A. Contractor agreements shall specify this mitigation measure. Penalties for non-compliance to be specified in contract documents. Verification of contract language shall be submitted to the Planning Department.</p> <p>B. The San Joaquin Valley Unified Air Pollution District may periodically inspect operating equipment, processing equipment, construction equipment and trucks utilized on the project site for proper operation and excessive emissions.</p>	
29.	Mitigation Measure (from Supplement to the Environmental Impact Report): Operators shall equip all construction/earth moving equipment, processing equipment, and trucks operating within the Specific Plan boundaries with current EPA/CARB approved control devices (catalyst/traps) to reduce particulate and NO _x emissions.	N/A	San Joaquin Valley Unified Air Pollution Control District; Kern County Planning Department

Table 1-6: Adopted MMMP – South Kern Industrial Center Composting Facility Project

General Plan Amendment Case No. 4, Map No. 158; Conditional Use Permit No. 2, Map No. 158 SCH# 1991122017

Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	<p>Justification (from Supplement to the Environmental Impact Report): The operation of heavy-duty, diesel powered construction equipment may generate excessive exhaust emissions, adding to the emissions inventory on a local scale.</p>	<p>Steps to Compliance</p> <p>A. Contractor agreements shall specify this mitigation measure. Penalties for non-compliance to be specified in contract documents. Verification of contract language shall be submitted to the Planning Department.</p> <p>B. The San Joaquin Valley Unified Air Pollution District may periodically inspect operating equipment, processing equipment, construction equipment and trucks utilized on the project site for proper operation and excessive emissions.</p>	
30.	<p>Mitigation Measure (from Supplement to the Environmental Impact Report): Operators within the Specific Plan Boundary shall request the San Joaquin Valley Air Pollution Control District’s Heavy Duty Engine Incentive Program to obtain emission reductions from older engines by replacing such engines with new, cleaner, fuel-efficient engines.</p>	N/A	Kern County Planning Department
	<p>Justification (from Supplement to the Environmental Impact Report): The operation of older, heavy-duty, diesel powered construction equipment may generate excessive exhaust emissions, adding to the emissions inventory on a local scale.</p>	<p>Steps to Compliance</p> <p>A. Prior to issuance of grading or building permits, operators of older equipment, not equipped with emission reduction equipment shall make application to the SJVUAPCD for Heavy Duty Incentive Program and provide proof of such request to the Planning Department.</p>	
31.	<p>Mitigation Measure (from Supplement to the Environmental Impact Report): Applicant shall request the Board of Supervisors adopt an incentive program for employers throughout the County to encourage the voluntary implementation of trip</p>	N/A	Kern County Planning Department

Table 1-6: Adopted MMMP – South Kern Industrial Center Composting Facility Project

General Plan Amendment Case No. 4, Map No. 158; Conditional Use Permit No. 2, Map No. 158 SCH# 1991122017

Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	reduction programs. Incentives offered could include reductions in parking requirements, street improvement requirements, developer fees, business license fees, permit fast tracking, among others.		
	Justification (from Supplement to the Environmental Impact Report): Due to the increase in vehicular emissions generated by project area workers, indirect sources generated by the project would result in a substantial increase in the inventory of air pollutants on a local scale in the long-term. The establishment of a viable trip reduction programs for the project area employees would reduce the amount of pollutants, thereby minimizing the air quality impacts of the project on the local environment in the long-term.	Steps to Compliance A. Prior to issuance of building permits, the applicants shall request the Board of Supervisors adopt an incentive program for employers throughout the County to encourage the voluntary implementation of trip reduction programs and shall submit proof of request to the Kern County Planning Department.	
32.	Mitigation Measure (from Supplement to the Environmental Impact Report): Prior to issuance of building permits, applicants shall specify on the building plans low nitrogen oxide (NO _x) emitting and/or high efficiency water heaters where appropriate.	N/A	Kern County Planning Department; Kern County Engineering and Survey Services/Building Inspection Division
	Justification (from Supplement to the Environmental Impact Report): Due to the increase in emissions generated by new project area businesses, indirect sources generated by the project would result in an increase in the inventory of air pollutants on a local scale in the long-term. The use of low nitrogen oxide (NO _x) emitting and/or high efficiency water heaters would reduce the amount of pollutants, thereby minimizing the air quality impacts of the project on the local environment in the long-term.	Steps to Compliance A. Prior to issuance of building permits, applicants shall specify on the building plans low nitrogen oxide (NO _x) emitting and/or high efficiency water heaters where appropriate. B. All applications for building permits shall be reviewed by the Kern County Engineering and Survey Services Department/Building Inspection Division.	
33.	Mitigation Measure (from Supplement to the Environmental Impact Report): Prior to the issuance of building permits for the organic recycling facility, a landscape and	N/A	Kern County Planning Department; Kern County

Table 1-6: Adopted MMMP – South Kern Industrial Center Composting Facility Project

General Plan Amendment Case No. 4, Map No. 158; Conditional Use Permit No. 2, Map No. 158 SCH# 1991122017

Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	irrigation plan shall be submitted to the Kern County Planning Department for approval. The landscape plan shall include trees on the berm surrounding the facility.		Engineering and Survey Services/Building Inspection Division
	Justification (from Supplement to the Environmental Impact Report): Due to the increase in project businesses, indirect sources generated by the project would result in a substantial increase in the inventory of air pollutants on a local scale in the long-term. The establishment of landscaping and planting of trees, would reduce the amount of pollutants, thereby minimizing the air quality impacts of the project on the local environment in the long-term.		Steps to Compliance A. Prior to issuance of building permits for the organic recycling facility, a landscape and irrigation plan shall be submitted to the Kern County Planning Department for approval. A minimum of 5% landscaping is required. The landscape plan shall include trees on the berm surrounding the facility.
34.	Mitigation Measure (from Supplement to the Environmental Impact Report): Building plans for the organic recycling facility shall include the following: buildings should be placed on a north/south plane and increased insulation beyond Title 24 requirements.	N/A	Kern County Planning Department; Kern County Engineering and Survey Services/Building Inspection Division
	Justification (from Supplement to the Environmental Impact Report): Due to the increase in project businesses, indirect sources generated by the project would result in a substantial increase in the inventory of air pollutants on a local scale in the long-term. The establishment of energy-saving design features, would reduce the amount of pollutants, thereby minimizing the air quality impacts of the project on the local environment in the long-term.		Steps to Compliance A. Prior to issuance of building permits for the recycling facility, all applications shall provide a site plan showing buildings oriented on a north/south plane. All building plans shall specify insulation increased beyond the Title 24 requirements.
35.	Mitigation Measure (from Supplement to the Environmental Impact Report): Prior to issuance of building or grading permits, construction plans for the 100-acre organic recycling facility shall incorporate the recommendations found in the “Receive and Discharge Analysis,” dated June 1, 2001 prepared for the project by Porter-Robertson	N/A	Kern County Planning Department; Kern County Engineering and Survey Services/Building Inspection Division

Table 1-6: Adopted MMMP – South Kern Industrial Center Composting Facility Project

General Plan Amendment Case No. 4, Map No. 158; Conditional Use Permit No. 2, Map No. 158 SCH# 1991122017

Monitoring Program #	Mitigation Measure	Trustee Agency with Jurisdiction	Responsible Monitoring Agency
	Engineering and Surveying, Inc. and clarified with additional information in the Addendum dated July 31, 2002.		
	<p>Justification (from Supplement to the Environmental Impact Report): Activities related to the construction and operation of the organic recycling facility could result in potential degradation of water quality.</p>	<p>Steps to Compliance</p> <p>A. At the time of processing any CUP for the Organic Waste Recycling Facility, this mitigation measure shall be included as a condition of approval.</p> <p>B. Prior to issuance of building or grading permits, construction plans for the 100-acre organic recycling facility shall incorporate the recommendations found in the “Revised Receive and Discharge Analysis,” dated July 31, 2002 prepared for the project by Porter-Roberson Engineering and Surveying, Inc and clarified with additional information in the Addendum dated July 31, 2002.</p> <p>C. At the time of zoning approval, the Planning Department staff shall attach the revised Receive and Discharge report to the plans.</p>	

Chapter 2 Introduction

2.1 Intent of the California Environmental Quality Act

Kern County, as lead agency, has determined that an Environmental Impact Report (EIR) must be prepared for the proposed Synagro South Kern County Composting Manufacturing Facility Project (proposed project). The proposed project includes a request for modifications to the existing Conditional Use Permit (CUP) necessary to allow the South Kern Compost Manufacturing Facility (Facility) to receive and manage newly defined types of organic waste streams for composting, as required by CalRecycle. The Facility was originally approved by the Kern County Board of Supervisors and has been in operation since 2006 under CUP No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421).

South Kern Industrial Center, LLC (Project Proponent) is proposing modifications to the current operations to include:

- (1) Increase the types of composting feedstocks accepted at the facility, including digestate, in response to Assembly Bill 1826 and Senate Bill 1383 requirements;
- (2) Install new equipment to be used as part of pre-processing and post-composting operations, including, but not limited to grinders, electrical screens, etc., to improve composting efficiency and capability;
- (3) Increase all pile heights from 15 feet to 20 feet, including, but not limited to, receiving, mixing, composting, curing, screening, and finished product; and
- (4) Increase storage time of finished compost product from 7 days to 180 days to accommodate seasonal markets and be consistent with regulatory permitting requirements.

The CUP Modification does not propose to change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre compost facility permitted under the existing CUP. Approval of the proposed CUP modifications may require alterations to existing State, regional, and local permits listed in **Table 3-3, Proposed Discretionary Actions/Required Approvals of Section 3, Project Description**. The Project Proponent is currently working with the respective agencies to coordinate any necessary permit modifications with this CUP Modification. The project is described in detail in **Chapter 3, Project Description**.

2.1.1 Purpose of the California Environmental Quality Act Process

This EIR has been prepared pursuant to the following relevant State and County statutes and guidelines:

- The California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.)
- CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000 et seq.)
- The Kern County CEQA Implementation Document

The overall purposes of the CEQA process are to:

- Ensure that the environment and public health and safety are protected in the face of discretionary projects initiated by public agencies or private concerns.
- Provide for full disclosure of the project's environmental effects to the public, the agency decision-makers who will approve or deny the project, and responsible and trustee agencies charged with managing resources (e.g., wildlife, air quality) that may be affected by the project.
- Provide a forum for public participation in the decision-making process with respect to environmental effects.

2.2 Purpose of this Environmental Impact Report

An EIR is a public informational document used in the planning and decision-making process. This project-level EIR will analyze the environmental impacts of the proposed project. The Kern County Planning Commission and Board of Supervisors will consider the information in the EIR, including the public comments and staff response to those comments, during the public hearing process. The final decision is made by the Board of Supervisors, who may approve, conditionally approve, or deny the project. The purpose of an EIR is to identify:

- The potentially significant impacts of the project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated;
- Any unavoidable adverse impacts that cannot be mitigated; and
- Reasonable and feasible alternatives to the project that would eliminate any significant adverse environmental impacts or reduce the impacts to a less-than-significant level.

An EIR also discloses growth-inducing impacts; impacts found not to be significant; and significant cumulative impacts of the project when taken into consideration with past, present, and reasonably anticipated future projects.

CEQA requires that an EIR reflect the independent judgment of the lead agency regarding the impacts, the level of significance of the impacts both before and after mitigation, and mitigation measures proposed to reduce the impacts. A Draft EIR is circulated to responsible agencies, trustee agencies with resources affected by the project, and interested agencies and individuals. The purposes of public and agency review of a Draft EIR include sharing expertise, disclosing agency analyses, checking for accuracy, detecting omissions, discovering public concerns, and soliciting

mitigation measures and alternatives capable of avoiding or reducing the significant effects of the project, while still attaining most of the basic objectives of the project.

2.2.1 Issues to Be Resolved

Section 15123(b) (3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choices among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved regarding the project include decisions by the lead agency as to whether or not:

- The Draft EIR adequately describes the environmental impacts of the project;
- An alternative should be chosen;
- The recommended mitigation measures should be adopted or modified; and
- Additional mitigation measures need to be applied to the project.

2.3 Terminology

To assist reviewers in understanding this Draft EIR, the following terms are defined:

- *Project* means the whole of an action that has the potential for resulting in a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.
- *Environment* refers to the physical conditions that exist in the area and that would be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved is where significant direct or indirect impacts would occur as a result of the project. The environment includes both natural and man-made (artificial) conditions.
- *Impacts* analyzed under CEQA must be related to a physical change. Impacts are:
 - Direct or primary impacts that would be caused by the project and would occur at the same time and place; or
 - Indirect or secondary impacts that would be caused by the project and would be later in time or farther removed in distance, but would still be reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other effects related to induced changes in the pattern of land use; population density or growth rate; and related effects on air and water and other natural systems, including ecosystems.
- *Significant impact on the environment* means a substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. An economic or social change by itself is not considered a significant impact on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

- *Mitigation* consists of measures that avoid or substantially reduce the project's significant environmental impacts by:
 - Avoiding the impact altogether by not taking a certain action or parts of an action;
 - Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
 - Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 - Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or
 - Compensating for the impact by replacing or providing substitute resources or environments.
- *Cumulative impacts* are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. The following statements also apply when considering cumulative impacts:
 - The individual impacts may be changes resulting from a single project or separate projects.
 - The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant projects taking place over time.

This EIR uses a variety of terms to describe the level of significance of adverse impacts. These terms are defined as follows:

- *Less than significant.* An impact that is adverse but that does not exceed the defined thresholds of significance. Less than significant impacts do not require mitigation.
- *Significant.* An impact that exceeds the defined thresholds of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less than significant level.
- *Significant and unavoidable.* An impact that exceeds the defined thresholds of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures.

2.4 Decision-Making Process

CEQA requires lead agencies to solicit and consider input from other interested agencies, citizen groups, and individual members of the public. CEQA also requires the project to be monitored after it has been permitted to ensure that mitigation measures are carried out.

CEQA requires the lead agency to provide the public with a full disclosure of the expected environmental consequences of the project and with an opportunity to provide comments. In accordance with CEQA, the following steps constitute the process for public participation in the decision-making process:

- **Notice of Preparation (NOP)/Initial Study (IS).** Kern County prepared and circulated a NOP/IS for 30 days to responsible, trustee, and local agencies for review and comment beginning on October 25, 2018 and ending on November 26, 2018.
- **Draft EIR Preparation/Notice of Completion (NOC).** A Draft EIR is prepared, incorporating public and agency responses to the IS/NOP and the scoping process. The Draft EIR is circulated for review and comment to appropriate agencies and additional individuals and interest groups who have requested to be notified of EIR projects. Per Section 15105 of the CEQA Guidelines, Kern County will provide for a 45-day public review period on the Draft EIR. Kern County will subsequently respond to each comment on the Draft EIR received in writing through a Response to Comments chapter in the Final EIR. The Response to Comments will be provided to each agency or person who provided written comments on the EIR a minimum of ten business days before the scheduled Planning Commission hearing on the Final EIR and project.
- **Preparation and Certification of Final EIR.** The Kern County Planning Commission will consider the Final EIR and the project, acting in an advisory capacity to the Kern County Board of Supervisors. Upon receipt of the Planning Commission's recommendation, the Board of Supervisors will also consider the Final EIR, all public comments, and the project and take final action on the project. At least one public hearing will be held by both the Planning Commission and Board of Supervisors to consider the Final EIR, take public testimony, and then approve, conditionally approve, or deny the project.

2.4.1 Notice of Preparation/Initial Study

Pursuant to Section 15082 of the CEQA Guidelines, as amended, the Kern County Planning Department circulated a Notice of Preparation/Initial Study (NOP/IS) to the State Clearinghouse, public agencies, special districts, and members of the public for a public review period beginning October 25, 2018 and ending on November 26, 2018. The NOP/IS was also posted in the Kern County Clerk's office for 30 days and sent to the state Clearinghouse at the Governor's Office of Planning and Research to solicit Statewide agency participation in determining the scope of the EIR.

The purpose of the NOP/IS is to formally convey that Kern County, as the lead agency, solicited input regarding the scope and proposed content of the EIR. The NOP/IS and all comment letters are provided in Appendix A of this EIR.

2.4.2 Scoping Meeting

Pursuant to Section 15082 (c)(1) of the CEQA Guidelines, for projects of statewide, regional, or area-wide significance, the lead agency is required to conduct at least one scoping meeting. The scoping meeting is for jurisdictional agencies and interested persons or groups to provide comments

regarding, but not limited to, the range of actions, alternatives, mitigation measures, and environmental effects to be analyzed. Kern County hosted a scoping meeting on November 14, 2018, at the Kern County Public Services Building, 2700 “M” Street, Suite 100, Bakersfield, California.

2.4.3 Notice of Preparation/Initial Study and Scoping Meeting Results

Specific environmental concerns raised in written comments received during the NOP/IS public review period are discussed below. The NOP/IS and all comments received are included in Appendix A, along with the Summary of Proceedings from the Scoping Meeting.

2.4.4 NOP Written Comments

The following specific environmental concerns listed in **Table 2-1**, *Summary of NOP/IS Comments*, were received in writing by the County in response to the NOP/IS.

Table 2-1: Summary of NOP/IS Comments

Commenter/Date	Summary of Comment
<i>State Agencies</i>	
CA Governor’s Office of Planning and Research October 25, 2018	The letter is a copy of the letter sent to reviewing agencies acknowledging receipt of the NOP and informing the responsible agencies of the commenting process.
CA Governor’s Office of Planning and Research October 26, 2018	The letter is a copy of the letter sent to reviewing agencies identifying minor revisions to the NOP. These revisions consisted of an update to the Project Issues Discussed in Document section of the Notice of Completion (NOC). This revision was made in order to correctly identify which project issues are discussed in the Initial Study. Additionally, County Staff revised the date of the Scoping Meeting as advertised on the cover letter of the NOP/IS from November 14, 2018 to November 13, 2018.
CA Department of Transportation November 14, 2018	The commenter suggests the following be considered in the preparation of the EIR: <ul style="list-style-type: none"> • The document initially states that the facility is permitted to receive a maximum of 354 average daily trips (ADTs) made by vehicles entering and leaving the project site, and that the maximum ADT will not change as a result from the modifications. However, Page 42 of the document states that the proposed modifications in the CUP will increase the average daily trips (ADTs) required with the addition of new feedstocks. Please clarify how these proposed modifications are expected to increase the current permitted ADTs made by vehicles entering and leaving the site. • Access to the project site will include using Interstate 5, State Route (SR) 99, SR 166, and/or SR 33, before traveling through South Lake Road to Santiago Road. Please provide information regarding the truck

Table 2-1: Summary of NOP/IS Comments

Commenter/Date	Summary of Comment
	<p>traffic generated from this project. The potential impacts on State facilities and its surroundings will need to be further investigated.</p>
<p>California Public Utilities Commission November 20, 2018</p>	<p>The commenter suggests the following be considered in the preparation of the EIR:</p> <ul style="list-style-type: none"> • Rail crossing safety into and out of the project site in order to evaluate if mitigation measures or crossing improvements are necessary. • Any development adjacent to or near the railroad right-of-way (ROW) should be planned with the safety of the rail corridor in mind. New developments may change vehicular traffic volumes at nearby rail crossings. Traffic impact studies should analyze rail crossing safety and potential mitigation measures. Safety improvement measures may include the planning for grade separations or improvements to existing at-grade crossings. • Construction or modification of public crossings requires authorization from the Commission.
<p>California Department of Conservation, Division of Oil, Gas, and Geothermal Resources November 20, 2018</p>	<p>The commenter expressed the following:</p> <ul style="list-style-type: none"> • The project is located outside of any of the Division's oil field administrative boundaries. • Division records indicate there are no known oil, gas, or geothermal wells located within the project boundary as identified in the NOP. • If during project operations any unrecorded wells are encountered, the project developer or property owner shall immediately notify the Division's Inland District office for consultation.
<p>California Department of Resources Recycling and Recovery November 20, 2018</p>	<p>The commenter requests the following:</p> <ul style="list-style-type: none"> • The proposed changes to the operations and feedstock processing will need to be fully described per Title 14, California Code of Regulations (14 CCR), Sections 17863 and 17863.4 requiring amendments to the Report of Facility Information. • The Kern County Environmental Health Division is the Local Enforcement Agency (LEA) for Kern County and responsible for providing regulatory oversight of solid waste handling activities, including inspections and enforcement. Please contact the LEA to discuss the regulatory requirements for the project.
<p>Native American Heritage Commission November 6, 2018</p>	<p>The commenter recommends preparation of the EIR be in accordance with AB 52, SB 18 and NAHC recommendations, which include:</p> <ul style="list-style-type: none"> • Creating a separate category of cultural resources, also known as tribal cultural resources • Notifying tribal representative 14 days before of Notice of

Table 2-1: Summary of NOP/IS Comments

Commenter/Date	Summary of Comment
	<p>Completion</p> <ul style="list-style-type: none"> • Begin consultation within 30 days of receiving the tribe’s request for consultation • Discussing mandatory topics and feasible mitigation measures • Following confidentiality procedures • Contacting the appropriate regional CHRIS Center • Submitting archeological inventory surveys to the appropriate CHRIS center, if applicable • Contacting NAHC for sacred lands files and a Native American Tribal Consultation List
<p>San Joaquin Valley Air Pollution Control District November 26, 2018</p>	<p>The commenter suggests the following be considered in the preparation of the EIR:</p> <ul style="list-style-type: none"> • At the federal level for the National Ambient Air Quality Standards (NAAQS), the District is currently designated as extreme nonattainment for the 8-hour ozone standards; nonattainment for the PM_{2.5} standards; and attainment for the 1-Hour ozone, PM₁₀ and CO standards. At the state level, the District is currently designated as nonattainment for the 8-hour ozone, PM₁₀, and PM_{2.5} California Ambient Air Quality Standards (CAAQS). The District recommends that the Air Quality section of the EIR include a discussion of the following impacts: <ul style="list-style-type: none"> – Criteria Pollutants: Project related criteria pollutant emissions should be identified and quantified. The discussion should include existing and post-project emissions. <ul style="list-style-type: none"> ▪ Construction Emissions: Construction emissions are short-term emissions and should be evaluated separately from operational emissions. <ul style="list-style-type: none"> ○ Recommended Mitigation Measure. To reduce impacts from construction related exhaust emissions, the District recommends feasible mitigation for the project to utilize off-road construction fleets that can achieve fleet average emissions equal to or cleaner than the Tier III emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. This can be achieved through any

Table 2-1: Summary of NOP/IS Comments

Commenter/Date	Summary of Comment
	<p>combination of uncontrolled engines and engines complying with Tier III and above engine standards.</p> <ul style="list-style-type: none"> ▪ Operational Emissions: Permitted (stationary sources) and non-permitted (mobile sources) sources should be analyzed separately. Recommended Mitigation Measure: Should Project operational mobile source emissions exceed the District’s annual criteria thresholds of significance, the District recommends full mitigation through implementation of a Voluntary Emission Reduction Agreement (VERA). <p>A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of air emissions increase through a process that funds and implements emission reduction projects administered through the District’s emission reduction incentive grant programs. The VERA can be implemented to address air quality impacts from both construction and operational phases of a proposed project.</p> <p>The emission reductions secured through VERA’s are “surplus” of existing regulations, achieving reductions earlier or beyond those required by regulations.</p> <ul style="list-style-type: none"> – Nuisance Odors: The Project should be evaluated to determine the likelihood that the Project would result in nuisance odors. Nuisance orders are subjective, thus the District has not established thresholds of significance for nuisance odors. Nuisance odors may be assessed qualitatively taking into consideration of Project design elements and proximity to off-site receptors that potentially would be exposed objectionable odors. – Health Risk Screening/Assessment: A Health Risk Screening/Assessment identifies potential Toxic Air Contaminants (TAC's) impact on surrounding sensitive receptors such as hospitals, daycare centers, schools, work-sites, and residences. <p>The District recommends the Project be evaluated for potential health impacts to surrounding receptors (on-site and off-site) resulting from operational and multi- year construction TAC emissions.</p>

Table 2-1: Summary of NOP/IS Comments

Commenter/Date	Summary of Comment
	<ul style="list-style-type: none"> ▪ The District recommends conducting a screening analysis that includes all sources of emissions. A screening analysis is used to identify projects which may have a significant health impact. A prioritization, using CAPCOA’s updated methodology, is the recommended screening method. A prioritization score of 10 or greater is considered to be significant and a refined Health Risk Assessment (HRA) should be performed. ▪ The District recommends a refined HRA for projects that result in a prioritization score of 10 or greater. It is recommended that the Project proponent contact the District to review the proposed modeling protocol. The Project would be considered to have a significant health risk if the HRA demonstrates that the Project related health impacts would exceed the Districts significance threshold of 20 in a million for carcinogenic risk and 1.0 for the Acute and Chronic Hazard Indices. ▪ Please provide the following information electronically to the District for review: <ul style="list-style-type: none"> ○ HRA AERMOD model files ○ HARP2 files ○ Summary of emissions source locations, emissions rates, and emission factor calculations and methodology. – Ambient Air Quality Analysis: An ambient air quality analysis (AAQA) uses air dispersion modeling to determine if emissions increases from a project will cause or contribute to a violation of the ambient air quality standards. The District recommends that an AAQA be performed for the Project if emissions exceed 100 pounds per day of any pollutant. <p>If an AAQA is performed, the analysis should include emissions from both Project specific permitted and non-permitted equipment and activities. The District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis.</p> • In addition to the discussions on potential impacts identified above, if preliminary review indicates that an EIR should be prepared, the District recommends the EIR also include the following discussions:

Table 2-1: Summary of NOP/IS Comments

Commenter/Date	Summary of Comment
	<ul style="list-style-type: none"> - A discussion of the methodology, model assumptions, inputs and results used in characterizing the Project’s impact on air quality. To comply with CEQA requirements for full disclosure, the District recommends that the modeling outputs be provided as appendices to the EIR. The District further recommends that the District be provided with an electronic copy of all input and output files for all modeling. - A discussion of the components and phases of the Project and the associated emission projections, including ongoing emissions from each previous phase. - A discussion of Project design elements and mitigation measures, including characterization of the effectiveness of each mitigation measure incorporated into the Project. - A discussion of whether the Project would result in a cumulatively considerable net increase of any criteria pollutant or precursor for which the San Joaquin Valley Air Basin is in non-attainment. • The proposed Project may be subject to District rules and regulations, including: Regulation VIII (Fugitive PM₁₀ Prohibitions), Rule 4102 (Nuisance), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). In the event an existing building will be renovated, partially demolished or removed, the Project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants). • This Project will be subject to District Rule 2010 (Permits Required) and Rule 2201 (New and Modified Stationary Source Review) and will require District permits. Prior to construction, the Project proponent should submit to the District an application for an Authority to Construct (ATC). • As stated above, the project will be subject to District Rule 2010 and Rule 2201. Per Section 4.4.3 of District Rule 9510 (Indirect Source Review), any project whose primary functions are subject to District Rule 2010 and Rule 2201 is exempted from Rule 9510. Therefore, the District concludes that the proposed Project is not subject to District Rule 9510.
<p>County of Kern Public Works Department – Building & Development Division</p>	<p>The commenter requests the following:</p>

Table 2-1: Summary of NOP/IS Comments

Commenter/Date	Summary of Comment
November 13, 2018	<ul style="list-style-type: none"> Provide County of Kern Public Works Department with a copy of the traffic engineering study for the Draft EIR for this project for review and comment.
County of Kern Public Health Services November 30, 2018	<p>The commenter suggests the following be considered in the preparation of the EIR:</p> <ul style="list-style-type: none"> Revise the project's Solid Waste Facility Permit. Include all operational changes, including types of feedstocks and bulking agents in an updated Report of Compost Site Information (RCSI). Provide an updated Odor Impact Minimization Plan (OIMP).
Public Works Floodplain Management Section November 1, 2018	<p>The commenter expresses the following regarding the project:</p> <ul style="list-style-type: none"> The runoff of storm water from the site would be increased due to the increase in impervious surface generated by the proposed development. The subject property is subject to flooding. <p>The commenter suggests the following be included as Conditions of approval for the project:</p> <ul style="list-style-type: none"> The applicant shall provide a plan for the disposal of drainage waters originating onsite and from adjacent road right-of-ways (if required), subject to approval of the Public Works Department, per the Kern County Development Standards. Associated flood hazard requirements will need to be incorporated into the design of this project per the Kern County Floodplain Management Ordinance.
Public Works Development –Waste Management December 14, 2018	<p>The commenter requests the following:</p> <p>The Department requests that "Amendment to Non-Disposal Facility Element" (NDFE) be added to our responsibility and the others be removed. The NDFE amendment is the only approval required under the jurisdiction of Public Works Operations.</p>
Kern County Superintendent of Schools October 31, 2018	<p>The commenter states:</p> <p>The project as proposed would have no significant effects on either of the district's facilities so long as statutory school facilities fees, if any, are collected as required by law and that no further mitigation measures regarding school facilities are necessary.</p>
Interested Parties	
Pacific Gas and Electric November 07, 2018	<p>The commenter suggests the following be considered in the preparation of the EIR:</p>

Table 2-1: Summary of NOP/IS Comments

Commenter/Date	Summary of Comment
	<ul style="list-style-type: none"> • This plan review process does not replace the application process for PG&E gas or electric service your project may require. For these requests, please continue to work with PG&E Service Planning. • If the project being submitted is part of a larger project, please include the entire scope of your project, and not just a portion of it. PG&E's facilities are to be incorporated within any CEQA document. PG&E needs to verify that the CEQA document will identify any required future PG&E services. • An engineering deposit may be required to review plans for a project depending on the size, scope, and location of the project and as it relates to any rearrangement or new installation of PG&E facilities. • Any proposed uses within the PG&E fee strip and/or easement, may include a California Public Utility Commission (CPUC) Section 851 filing. This requires the CPUC to render approval for a conveyance of rights for specific uses on PG&E's fee strip or easement. PG&E will advise if the necessity to incorporate a CPUC Section 851 filing is required. • There could be gas transmission pipelines in this area which would be considered critical facilities for PG&E and a high priority subsurface installation under California law. Care must be taken to ensure safety and accessibility. So, please ensure that if PG&E approves work near gas transmission pipelines it is done in adherence with the stipulations attached to the NOP letter. • It is PG&E's policy to permit certain uses on a case by case basis within its electric transmission fee strip(s) and/or easement(s) provided such uses and manner in which they are exercised, will not interfere with PG&E's rights or endanger its facilities. Some examples/restrictions are noted in the attachment included with the NOP comment letter.

2.4.5 Availability of the EIR

This EIR is being distributed directly to agencies, organizations, and interested groups and persons for comment during a 45-day formal review period in accordance with Section 15087 of the CEQA Guidelines. This EIR and the full administrative record for the project, including all studies, is available for review during normal business hours Monday through Friday at the Kern County Planning and Natural Resources Department, located at:

Kern County Planning and Natural Resources Department

2700 “M” Street, Suite 100
 Bakersfield, CA 93301-2370
 Phone: (661) 862-8600, Fax: (661) 862-8601

This EIR is also available on the Kern County Planning and Natural Resources Department website:
<https://kernplanning.com/planning/environmental-documents/>

Additionally, this EIR is available at the following libraries:

California State University Bakersfield
 – Library

9001 Stockdale Highway
 Bakersfield, CA 93309

Kern County Library/Beale

Local History Room

701 Truxtun Avenue

Bakersfield, CA 93301

2.5 Format and Content

This EIR addresses the potential environmental effects of the project and was prepared following input from the public and responsible and affected agencies, and through the EIR scoping process, as discussed previously. The contents of this EIR were based on the findings in the NOP/IS, and public and agency input. Based on the findings of the NOP/IS and scoping comments, a determination was made that an EIR was required to address potentially significant environmental effects on the following resources:

- Agriculture and Forestry Resources
- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gases
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Mineral Resources
- Noise
- Public Services
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities
- Wildfire

With respect to the following resource areas, which were discussed in the NOP/IS, it was determined that no impacts would occur that would require analysis in this EIR:

- Population and Housing

- Recreation

NOP/IS determined that although the project may result in a slight increase in employment opportunities in the area, these opportunities would not induce substantial population growth beyond County projections, alter the location, distribution, density or growth rate of the population beyond that projected in the KCGP Housing Element, result in a substantial increase in demand for additional housing, or create a development that significantly reduces the ability of the County to meet housing objectives set forth in the KCGP Housing Element. No construction of housing is proposed as part of the project and no people would be displaced. Therefore, the project would have no direct or indirect impacts on population or housing and no further analysis regarding population and housing is warranted.

The NOP also determined that the potential nominal increase in employment would not induce substantial population growth that would increase the need, or use of, or lead to the substantial physical deterioration of existing neighborhood and regional parks or other recreational facilities or require the construction or expansion of recreational facilities. Therefore, the project would have no direct or indirect impacts on recreation and no further analysis regarding recreation is warranted.

2.5.1 Required EIR Content and Organization

This EIR includes all of the sections required by CEQA. **Table 2-2, *Required EIR Contents***, contains a list of sections required under CEQA, along with a reference to the chapter in which they can be found in this EIR document.

Requirement (CEQA Guidelines Section)	Location in EIR
Table of contents (Section 15122)	Table of Contents
Summary (Section 15123)	Chapter 1
Introduction (Section 15132)	Chapter 2
Project description (Section 15124)	Chapter 3
Significant environmental impacts (Section 15126.2)	Sections 4.1–4.16
Environmental setting (Section 15125)	Sections 4.1–4.16
Mitigation measures (Section 15126.4)	Sections 4.1–4.16
Cumulative impacts (Section 15130)	Sections 4.1–4.16
Growth-inducing impacts (Section 15126.2)	Chapter 5
Effects found not to be significant (Section 15128)	Chapters 1-5; Sections 4.1–4.16
Significant irreversible changes (Section 15126.2)	Chapter 5
Unavoidable significant environmental impacts (Section 15126.2)	Chapter 5
Alternatives to the project (Section 15126.6)	Chapter 6
Responses to Comments (Section 15132)	Chapter 7
Organizations and Persons Consulted (Section 15129)	Chapter 8
List of preparers (Section 15129)	Chapter 9
References (Section 15129)	Chapter 10
Acronyms	Chapter 11

The content and organization of this EIR are designed to meet the requirements of CEQA and the CEQA Guidelines, as well as to present issues, analysis, mitigation, and other information in a logical and understandable way. This Draft EIR is organized into the following sections:

- **Chapter 1, *Executive Summary***, provides a summary of the project description and a summary of the environmental impacts and mitigation measures.
- **Chapter 2, *Introduction***, provides CEQA compliance information, an overview of the decision-making process, organization of the EIR, and a responsible and trustee agency list.
- **Chapter 3, *Project Description***, provides a description of the location, characteristics, and objectives of the projects, and the relationship of the projects to other plans and policies associated with the project.
- **Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures***, contains a detailed environmental analysis of the existing conditions, projects impacts, mitigation measures, and cumulative impacts.
- **Chapter 5, *Consequences of Project Implementation***, presents an analysis of the project's cumulative and growth-inducing impacts and other CEQA requirements, including significant and unavoidable impacts and irreversible commitment of resources.
- **Chapter 6, *Alternatives***, describes a reasonable range of alternatives to the projects that could reduce the significant environmental effects that cannot be avoided.
- **Chapter 7, *Responses to Comments***, is reserved for responses to comments on the EIR.
- **Chapter 8, *Organizations and Persons Consulted***, lists the organizations and persons contacted during preparation of this EIR.
- **Chapter 9, *Preparers***, identifies persons involved in the preparation of the EIR.
- **Chapter 10, *Bibliography***, identifies reference sources for the EIR.

Appendices provide information and technical studies that support the environmental analysis contained within the EIR.

The analysis of each environmental category in **Chapter 4** is organized as follows:

- “Introduction” provides a brief overview on the purpose of the section being analyzed with regards to the project.
- “Environmental Setting” describes the physical conditions that exist at this time and that may influence or affect the topic being analyzed.
- “Regulatory Setting” provides State and federal laws and the Kern County General Plan goals, policies, and implementation measures that apply to the topic being analyzed.
- “Impacts and Mitigation Measures” discusses the impacts of the projects in each category, presents the determination of the level of significance, and provides a discussion of feasible mitigation measures to reduce any impacts.

- “Cumulative Setting, Impacts, and Mitigation Measures” provides a discussion of the cumulative geographic area for each resource area, and analysis of whether the project would contribute to a significant cumulative impact, and if so, identifies cumulative mitigation measures.

2.6 Responsible and Trustee Agencies

Projects or actions undertaken by the lead agency, in this case the Kern County Planning and Natural Resources Department, may require subsequent oversight, approvals, or permits from other public agencies in order to be implemented. Other such state or local agencies are referred to as “responsible agencies” and “trustee agencies.” Pursuant to Sections 15381 and 15386 of the *CEQA* Guidelines, as amended, responsible agencies and trustee agencies are defined as follows:

- A “responsible agency” is a public agency that proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term “responsible agency” includes all public agencies other than the lead agency that have discretionary approval power over the project (Section 15381).
- A “trustee agency” is a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California (Section 15386).

The various public, private, and political agencies and jurisdictions with a particular interest in the project may include, but are not limited to, the following:

2.6.1 State Agencies

- Regional Water Quality Control Board (RWQCB)
- California Department of Resources Recycling and Recovery (CalRecycle)
- California Department of Toxic Substances
- California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA)

2.6.2 Local Agencies

- Kern County Board of Supervisors
- Kern County Public Works - Building and Development- Flood Plain & Survey
- Kern County Public Works – Operations & Maintenance - Regulatory Monitoring & Reporting
- Kern County Public Works – Department Review
- Kern County Public Works – Waste Management
- Kern County Fire Department
- San Joaquin Valley Air Pollution Control District

2.7 Incorporation by Reference

In accordance with Section 15150 of the CEQA Guidelines to reduce the size of the report, the following documents are hereby incorporated by reference into this EIR and are available for public review at the Kern County Planning and Natural Resources Department. A brief synopsis of the scope and content of these documents is provided below.

2.7.1 Kern County General Plan

The Kern County General Plan (KCGP) is a policy document with land use maps and related information that are designed to give long-range guidance to those County officials making decisions affecting the growth and resources of the unincorporated Kern County jurisdiction, excluding the metropolitan Bakersfield planning area. This document, adopted on June 14, 2004, and last amended on September 22, 2009, helps ensure that day-to-day decisions conform to the long-range program designed to protect and further the public interest as related to Kern County's growth and development and mitigate environmental impacts. The KCGP also serves as a guide to the private sector of the economy in relating its development initiatives to the public plans, objectives, and policies of the County.

2.7.2 Kern County Zoning Ordinance

According to the Kern County Zoning Ordinance Chapter 19.02.020, *General Provisions - Purposes*, Title 19 was adopted to promote and protect the public health, safety, and welfare through the orderly regulation of land uses throughout the unincorporated area of Kern County. Further, the purposes of this title are to:

- Provide the economic and social advantages resulting from an orderly planned use of land resources;
- Encourage and guide development consistent with the Kern County General Plan;
- Divide Kern County into zoning districts of a number, size, and location deemed necessary to carry out the purposes of the Kern County General Plan and this title;
- Regulate the size and use of lots, yards, and other open spaces;
- Regulate the use, location, height, bulk, and size of buildings and structures;
- Regulate the intensity of land use;
- Regulate the density of population in residential areas;
- Establish requirements for off-street parking;
- Regulate signs and billboards; and
- Provide for the enforcement of the regulations of Chapter 19.02, *General Provisions*.

2.7.3 Regional Transportation Plan (2018)

The latest Regional Transportation Plan (RTP) was prepared by the Kern Council of Governments (COG), and was adopted in August 16, 2018. The 2018 RTP is a long-term (20+ year) blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It was developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between local, regional, state, and federal agencies. This RTP provides transportation and air quality goals, policies, and actions for now and into the future, and includes programs and projects for congestion management, transit, airports, bicycles and pedestrians, roadways, and freight. In addition, it provides a discussion of all mechanisms used to finance transportation and air quality program implementation.

2.7.4 Kern County Airport Land Use Compatibility Plan (2012)

The Kern County Airport Land Use Compatibility Plan (ALUCP) was originally adopted in 1996 and has since been amended to comply with Aeronautics Law, Public Utilities Code (Chapter 4, Article 3.5) regarding public airports and surrounding land use planning. As required by that law, proposals for public or private land use developments that occur within defined airport influence areas are subject to compatibility review. The principal airport land use compatibility concerns addressed by the plan are: (1) exposure to aircraft noise, (2) land use safety with respect to both people and property on the ground and the occupants of aircraft, (3) protection of airport air space, and (4) general concerns related to aircraft overflights.

The ALUCP identifies policies and compatibility criteria for influence zones or planning area boundaries. The ALUCP maps and labels these zones as A, B1, B2, C, D and E, ranging from the most restrictive (A – airport property-runway protection zone) to the least restrictive (D – disclosure to property owners only) while the E zone is intended to address special land use development. As required by law, the following affected cities have adopted the ALUCP for their respective airports: Bakersfield, California City, Delano, Shafter, Taft, Tehachapi, and Wasco.

2.7.5 County of Kern Housing Element (2015-2023)

The development and preservation of adequate and affordable housing is important to the well-being of the residents and the economic prosperity of the County. To plan for the development of adequate housing for all income segments, a Housing Element was prepared as part of the Kern County General Plan. This document constitutes the Housing Element, which specifically addresses housing needs and resources in the County's unincorporated areas. This element must maintain consistency with the other elements of the Kern County General Plan.

2.8 Sources

This EIR is dependent upon information from many sources. Some sources are studies or reports that have been prepared specifically for the project. Other sources provide background information

related to one or more issue areas that are discussed in this document. The sources and references used in the preparation of this EIR are listed in **Chapter 10, *Bibliography***, and are available for review during normal business hours at the:

Kern County Planning and Natural Resources Department

2700 “M” Street, Suite 100
Bakersfield, California 93301-2370

This EIR is also available on the Kern County Planning and Natural Resources Department website:
<https://kernplanning.com/planning/environmental-documents/>

Chapter 3

Project Description

3.1 Project Overview

This Environmental Impact Report (EIR) has been prepared by Kern County (County), which is the Lead Agency, and is intended to identify and evaluate potential environmental impacts associated with the proposed modifications to the existing Conditional Use Permit (CUP) No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) under which South Kern Industrial Center, LLC (Project Proponent) operates the South Kern Compost Manufacturing Facility (Facility).

The proposed modifications are in response to recent changes in State of California Legislation that requires diversion of 50% of all organics from landfills by 2020 and 75% by 2025 and would not go into effect until after the County's approval of the modified CUP. In addition to the legislative changes for the diversion of organics from landfills, the California Department of Resources Recycling and Recovery (CalRecycle) and the State Water Resources Control Board (SWRCB) have updated the definition of "food material" to include both pre-consumer and post-consumer food waste streams. The proposed modifications to the CUP would allow the facility to receive and manage newly defined types of organic waste streams for composting, as required by CalRecycle. In response to the above, and to better serve end users, the Project Proponent is proposing changes to the composting and curing parameters used at the site to accommodate additional organic waste streams and meet the demands of the agricultural and horticultural markets that purchase the finished compost.

The proposed modifications to the CUP are as follows:

- Increase the types of composting feedstocks accepted at the facility, including digestate, in response to Assembly Bill 1826 and Senate Bill 1383 requirements;
- Install new equipment to be used as part of pre-processing and post-composting operations, including, but not limited to grinders, electrical screens, etc., to improve composting efficiency and capability;
- Increase all pile heights from 15 feet to 20 feet, including, but not limited to, receiving, mixing, composting, curing, screening, and finished product; and
- Increase storage time of finished compost product from 7 days to 180 days to accommodate seasonal markets and be consistent with regulatory permitting requirements.

The modification to the CUP would not change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre compost facility permitted under the existing CUP.

The project site is located within the administrative boundaries of the 744-acre South Kern Industrial Complex Specific Plan (SKICSP). Composting operations began in 2006 and are currently conducted on approximately 44 acres of the permitted 100-acre composting facility area ("project site"). The Facility is permitted to receive and process a total of 670,000 wet tons of material per year (wtpy). This is currently comprised of up to 400,000 wtpy of biosolids and pre-

consumer food waste and up to 270,000 wtpy of wood chips and agricultural waste products (i.e., pistachio and almond hulls, cotton gin waste, stable bedding, and screened green waste). The proposed modifications to the CUP would not change the total wet tons the Facility is permitted to receive; however, the wet tons of compostable materials and ratio of bulking agent would change. It should be noted that the total amount of biosolids would not exceed the 400,000 wet tons currently permitted.

3.2 Project Location and Environmental Setting

Regional Setting

The proposed project site is located in the Valley Region in the western portion of unincorporated Kern County, California, and is outside the sphere of influence (SOI) of any cities as shown in **Figure 3-1, Regional Location and Site Map**. Kern County is California's third largest county in land area and encompasses approximately 8,202 square miles (greater than five million acres). The County has a total population of approximately 917,553 (California Department of Finance [DOF], 2020).

The County's geography includes mountainous areas, agricultural lands and deserts and is divided into three general, but diverse, geographical regions including the Valley Region, the Mountain Region, and the Desert Region. The dominant land uses within the County are agriculture, petroleum exploration and extraction, and alternative energy (such as wind and solar energy) production. Additionally, over the last few decades, urban development has occurred in and around the County's 11 incorporated cities. The City of Bakersfield is located approximately 18 miles northeast of the proposed project and is the County's largest city with a population of approximately 392,756 people (DOF, 2020). The City of Taft is located approximately 7 miles to the west and is the closest city to the proposed project site, approximately 12 miles west. Taft has a population of approximately 8,680, a decline of 737 since 2019 people (DOF, 2020). The project site is approximately 27 miles east of the San Luis Obispo County line and approximately 34 miles north of the Ventura County Line. It is approximately 8 miles northeast of the unincorporated community of San Emidio, approximately 15 miles northwest of the unincorporated community of Lakeview, and approximately 20 miles southeast of the unincorporated communities of Dustin Acres and Valley Acres.

Local and Project Site Setting

The Project Site is located on Assessor Parcel Number (APN) 220-110-70 at 2653 Santiago Road and is entirely within Section 24, Township 32 South, Range 25 East, in the Mount Diablo Base and Meridian (Sec 24, T32S, R25E, M. D. B. & M.). The Project Site is in a relatively flat section of the County and is located within the U.S. Geological Survey (USGS) 7.5-minute series, Taft, California, topographic quadrangle. The elevation of the Project Site ranges from approximately 313 feet above mean sea level (amsl) to approximately 347 feet amsl.

The Project Site is bound by Santiago Road to the north and solar sites to the east, west, and south. Adjacent to the parcel boundaries is a solar site and beyond these developed areas the land is undeveloped or used for agriculture. Across Santiago Road to the north is a petroleum facility. To the west is an undeveloped parcel which is bound by South Lake Road and further west, across

South Lake Road, is undeveloped land and agricultural land. The entrance to the project site is located on Santiago Road off South Lake Road at the San Joaquin Valley Railroad crossing.

Access to the project site access is from Santiago Road, which is connected to Interstate 5 (I-5) approximately 7 miles to the west via South Lake Road and Millux Road. **Figure 3-1, *Regional Location and Site Map*** shows the access to the project site and the proposed project regional, local and site settings and **Figure 3-2, *Local Vicinity Map***, shows the existing site uses.

The project site comprises approximately 100-acres within an approximate 155-acre parcel. In addition to the composting facility, its uses and associated structures (collectively “Composting Facility” or “Facility”), the parcel contains undeveloped vacant land. This vacant land is routinely mowed or disked to control weeds leaving much of the area devoid of vegetative cover. Overall, the project site and immediately surrounding area is heavily disturbed.

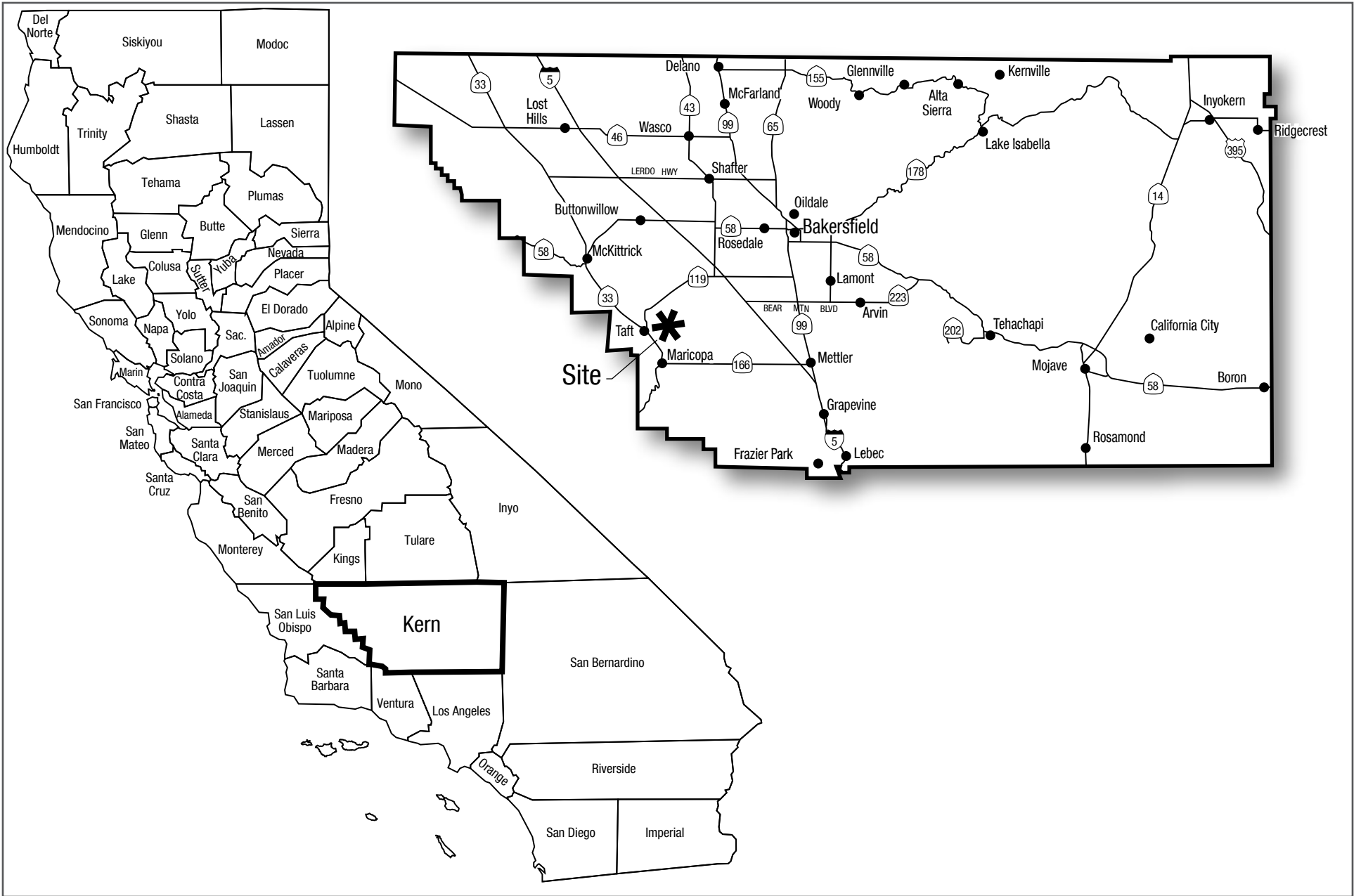
Within the Composting Facility there are conveyors, lifts, machinery, and vehicles used transport compost, and materials to be composted. These existing composting piles are comprised of open air, loosely stacked biosolids mixed with bulking materials that are composted using a covered aerated static pile composting system (“CASP”) to produce Class A compost (i.e., compost that is essentially free of pathogens prior to land application) (CalRecycle, 2018). The northerly portion of the Facility contains five structures, a parking lot, and an approximate 2.5-acre stormwater/process water pond.

The Project Site is located within Flood Zones A as designated by the Flood Insurance Rate Map (FIRM) (06029C2700E) as issued by the Federal Emergency Management Agency (FEMA) on September 26, 2008. Flood Zone A is a Special Flood Hazard Area and is listed as without base flood elevation (BFE) (FEMA, 2008). There are no identified State-designated Alquist-Priolo Earthquake Fault Zones on the project site. The nearest active faults that have had movement in the last 150 years include the San Andreas Fault approximately 16 miles to the southwest and the White Wolf Fault approximately 16 miles to the southeast. The Garlock Fault and Big Pine Faults have also experienced movement in the last 150 years and are located approximately 25 miles to the southeast and south, respectively (USGS, 2018)].

The Facility is served by the Kern County Sheriff’s Office for law enforcement and public safety. The closest sheriff substation is located approximately 13 miles northwest of the project site, at 315 North Lincoln Street in Taft. The Kern County Fire Department (KCFD) provides fire protection and emergency medical and rescue services for the project area. The closest KCFD fire station is Station 21, located approximately 13 miles northwest of the project site at 303 10th Street in Taft.

Southern Kern Industrial Center Specific Plan (SKICSP)

The project site is located within the Southern Kern Industrial Center Specific Plan (SKICSP) which includes a total of 744 acres and is intended to be the primary growth and development implementation tool for the area. The SKICSP was most recently amended October 22, 2002 and is intended to provide for the orderly development of the plan area and address particular issues and concerns unique to the area and sites such as the proposed project. The SKICSP also is intended to be used as a planning tool to closely define the planning criteria of the specific plan area, to define the nature and extent of growth, and to ensure orderly development. The SKICSP specifically encourages industrial land use. The SP district requires compliance with the



SOURCE: Kimley-Horn, 2021



Regional Location and Site Map

Figure 3-1



SOURCE: Google Earth, 2020



Local Vicinity Map

Figure 3-2

development standards of the M-3 zoning district of the Kern County General Plan, however, the SP district does not allow for as many heavy industrial land uses as the M-3 zoning district to provide better control over and reduce the potential for impacts from development within the SKICSP. The SP district is also consistent with the KCGO map code 7.3 though more restrictive. The SKICSP was designed to achieve three primary goals: implement the Kern County General Plan (KCGP), establish development standards, and guide the planned development of the SKIC. Below, **Figure 3-3, Existing General Plan and South Kern Industrial Center Specific Plan Zoning Map**, depicts the overall 744 acres SKICSP area and the proposed project site, which shows the project site as well as land use designations of the surrounding land uses

The SKICSP is internally consistent with the Kern County General Plan (KCGP) and incorporates the County-wide General Plan goals and policies by addressing the mandatory General Plan elements. Accordingly, the land use designation within SKICSP mirror those of the existing KCGP. The land use designations for the SKICSP include 7.3 (Heavy Industrial), 2.5 (Flood Hazard Area), 3.4 (Solid Waste Facilities), 8.4 (Mineral and Petroleum), and 3.3 (Public Facilities). These designations were deemed consistent with the provision of State Code Section 65450 et. seq.

Surrounding Land Uses

As previously discussed, land uses immediately surrounding the project site include solar installations to the west, south and east and a petroleum oil refinery with three tanks and petroleum piping, which is located to the north across Santiago Road. The solar installation encompasses approximately 216 acres and the petroleum oil refinery occupies approximately 80 acres. Northwest of the project site, along South Lake Road, is a railroad spur that ends approximately 1 mile southwest of the project area. The railroad extends northerly where it serves a second petroleum facility approximately one mile to the north. Other uses in the vicinity include Hughes Rocket Booster Testing Facility, Baker Petrolite Chemical Plant, a car cleaning facility, and Boswell Cotton Gin, approximately 1 mile to the north, outside the SKICSP boundary.

The nearest residence to the project site is approximately 1.5 miles to the north of the Facility. There also is a mobile home residence permitted for use by the caretaker/operator of a catfish farm approximately 1.5 miles northeast of the project site. The nearest community, San Emidio, is approximately 8 miles to the northwest of the existing Facility.

The remainder of the surrounding areas are sparsely developed with the vast majority of land being vacant or under agricultural production. The agricultural uses consist predominantly of cotton and alfalfa to the north and irrigated row crops to the south. The California Aqueduct is approximately 3.5 miles to the south and provides water for agricultural needs, as well as for the communities and cities south of the project area.

Existing Land Use Designations

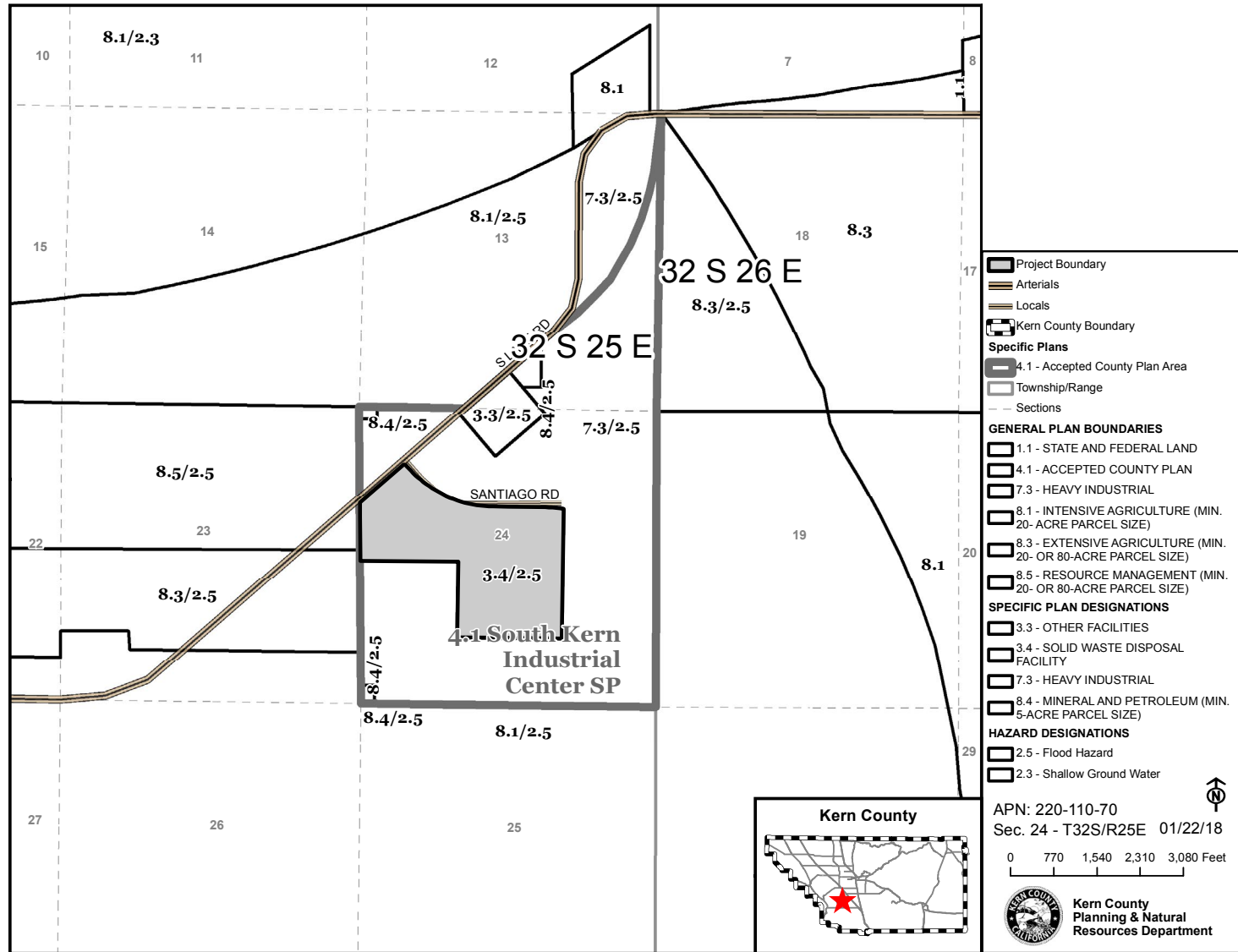
The entire project site is designated by the Kern County General Plan as 4.1 (Accepted County Plan). Per the SKICSP, the land use designation for the 100-acre project site is 3.4/2.5 (Solid Waste Facility/Flood Hazard). The land use designations for the remaining areas of the parcel includes 7.3/2.5 (Heavy Industrial/Flood Hazard).

The entire Project Site is also subject to the provisions of the Kern County Zoning Ordinance. As discussed above, the proposed project site is within the SKICSP. **Figure 3-3**, *Existing General Plan and South Kern Industrial Center Specific Plan Zoning Map*, shows the existing land use designations, and Specific Plan Zoning District of the site and surrounding area, as well as the surrounding land use designations. The entire project site is within the SKIC SP Zoning District. **Figure 3-4**, *South Kern Industrial Center Specific Plan Zoning Map*. **Table 3-1**, *Project Site and Surrounding Land Uses*, summarizes the project site and surrounding land uses.

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Table 3-1: Project Site and Surrounding Uses

		<i>Existing Land Use Designations</i>		<i>Existing Zoning</i>	
	<i>Existing Land Use</i>	<i>Map Code Designations within SKICSP (General Plan Map Code 4.1 – Accepted County Plan)</i>	<i>Map Code Designations immediately adjacent, but outside of the SKICSP</i>	<i>Classifications within SKICSP</i>	<i>Classifications immediately adjacent, but outside of the SKICSP</i>
Project Site	Developed with compost Facility and vacant land	3.4/2.5 (Solid Waste Facilities/Flood Hazard)	Not Applicable	South Kern Industrial Specific Plan (SP)	Not Applicable
North	Oil refinery	7.3/2.5 (Heavy Industrial/Flood Hazard) 3.3/2.5 (Other Facilities/Flood Hazard) 8.4/2.5 (Mineral and Petroleum/Flood Hazard)	8.3/2.5 (Extensive Agriculture/Flood Hazard) 8.1 (Intensive Agriculture) 8.1/2.5 (Intensive Agriculture/Flood Hazard) 8.1/2.3 (Intensive Agriculture/Shallow Groundwater) 7.3/2.5 (Heavy Industrial/Flood Hazard)	South Kern Industrial Specific Plan (SP) M-3 PD FPS (Heavy Industrial Precise Development Floodplain Secondary Combining District)	M-3 PD FPS (Heavy Industrial Precise Development Floodplain Secondary Combining District) A (Exclusive Agriculture) A FPS - Exclusive Agriculture Floodplain Secondary Combining District
South	Solar facility	7.3 (Heavy Industrial); 2.5 (Flood Hazard);	8.1/2.5 (Intensive Agriculture/Flood Hazard)	South Kern Industrial Specific Plan (SP) A Exclusive Agriculture	South Kern Industrial Specific Plan (SP) A Exclusive Agriculture
East	Solar facility	7.3 (Heavy Industrial); 2.5 (Flood Hazard);	8.1/2.5 (Intensive Agriculture/Flood Hazard), and 8.3/2.5 (Extensive Agriculture/Flood Hazard)	South Kern Industrial Specific Plan (SP) A - Exclusive Agriculture	South Kern Industrial Specific Plan (SP) A - Exclusive Agriculture
West	Solar facility	7.3 (Heavy Industrial); 2.5 (Flood Hazard);	8.1/2.5 (Intensive Agriculture/Flood Hazard) 8.5/2.6 (Resource Management/ Flood Hazard) 8.3/2.5 (Extensive Agriculture/Flood Hazard)	South Kern Industrial Specific Plan (SP) A- Exclusive Agriculture	South Kern Industrial Specific Plan (SP) A- Exclusive Agriculture

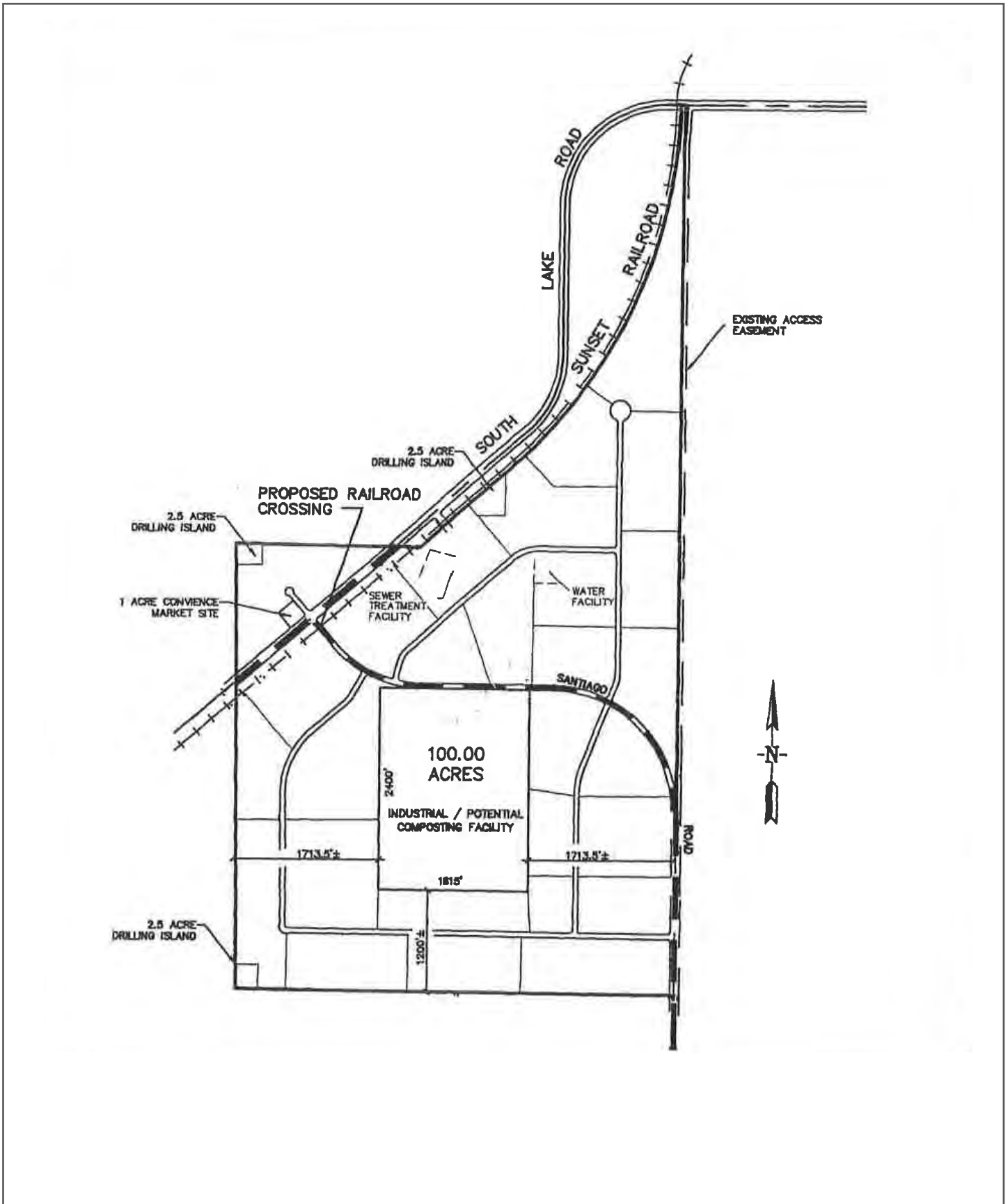


SOURCE: SKICSP, 2002



Existing General Plan and South Kern Industrial Center Specific Plan Land Use Designations

Figure 3-3



SOURCE: SKICSP, 2002



South Kern Industrial Center Specific Plan Zoning Map

Figure 3-4

3.3 Project Objectives

The proposed project has the following objectives as stated by the project proponent:

- Assist in obtaining the State’s targets to achieve a 50 percent reduction in the level of the Statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025 per SB 1383;
- Continue to operate a state-of-the-art regional composting facility to meet the organic waste diversion requirements enacted by recent California legislation (AB 32, AB 1826, SB 1383, etc.) to reduce volatile organic compound and greenhouse gas emissions through the diversion of organic material that would otherwise be disposed of in a landfill;
- Accommodate the growing market demand for “Organic” compost by targeting agricultural material, food material, vegetative food material, manure, and other compostable, organic, and recyclable materials to produce high quality compost for the agricultural community and customers;
- Utilize existing infrastructure for composting operations to preserve prime farmland, minimize environmental impact, and provide continued economic benefits to Kern County through employment of local residents including compliance with SB 1383 recycling goals;
- Provide ongoing composting activities in compliance with San Joaquin Valley Air Pollution Control District and Regional Water Quality Control Board rules and regulations; and
- Manufacture high quality compost for use in sustainable agriculture practices to create water saving opportunities and enhancement of agricultural soils.

3.4 Proposed Project

Existing Permits

Composting operations on the project site began in 2006 and are currently conducted on approximately 44 acres of the permitted 100-acre site. The Facility is permitted to receive and process a total of 670,000 wet tons of material per year (wtpy). This is currently comprised of up to 400,000 wtpy of biosolids and pre-consumer food waste and up to 270,000 wtpy of wood chips and agricultural waste products (i.e., pistachio and almond hulls, cotton gin waste, stable bedding, and screened green waste).

The existing Compost Facility was analyzed in the 2002 Supplemental EIR SCH 1991122017, which fully analyzed a covered aerated static pile (CASP) composting facility that operates under the following permits and entitlements:

- Kern County - Conditional Use Permit No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421)
- CalRecycle - Solid Waste Facility Permit No. 15-AA-0381
- Regional Water Quality Control Board – Central Valley Region (RWQCB)- Waste Discharge Requirements R5-2005-0077
- San Joaquin Valley Air Pollution Control District - Authority to Construct Permit No. S 4212-2-6

CUP Modification

As discussed above, the existing Facility began operation in 2006. The proposed CUP modification is in response to recent changes in State of California Legislation that requires diversion of 50% of all organics from landfills by 2020 and 75% by 2025. In addition, CalRecycle and the State Water Resources Control Board have updated the definition of “food material” to include both pre-consumer and post-consumer food waste streams. The modification to the CUP would allow the facility to receive and manage the newly defined types of materials, inclusive of, but not limited to food materials and organic waste streams for composting, as required by the legislature. In addition, the CUP modification makes changes to the composting and curing parameters to meet the demands of the agricultural and horticultural markets that purchase the finished compost.

The proposed modifications to the CUP are as follows:

- Increase the types of composting feedstocks accepted at the facility, including digestate, in response to Assembly Bill 1826 and Senate Bill 1383 requirements;
- Install new equipment to be used as part of pre-processing and post-composting operations, including, but not limited to grinders, electrical screens, etc. to improve composting efficiency and capability;
- Increase all pile heights from 15 feet to 20 feet including, but not limited to, receiving, mixing, composting, curing, screening, and finished product; and
- Increase storage time of finished compost product from 7 days to 180 days to accommodate seasonal markets and be consistent with regulatory permitting requirements.

The CUP Modification does not propose to change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre compost facility permitted under the existing CUP. Approval of the proposed CUP modifications may require alterations to the above Existing Permits. The Project Proponent is currently working with the respective agencies to coordinate any necessary permit modifications with this CUP Modification. **Figure 3-5, Proposed Site Plan** shows the proposed site plan.

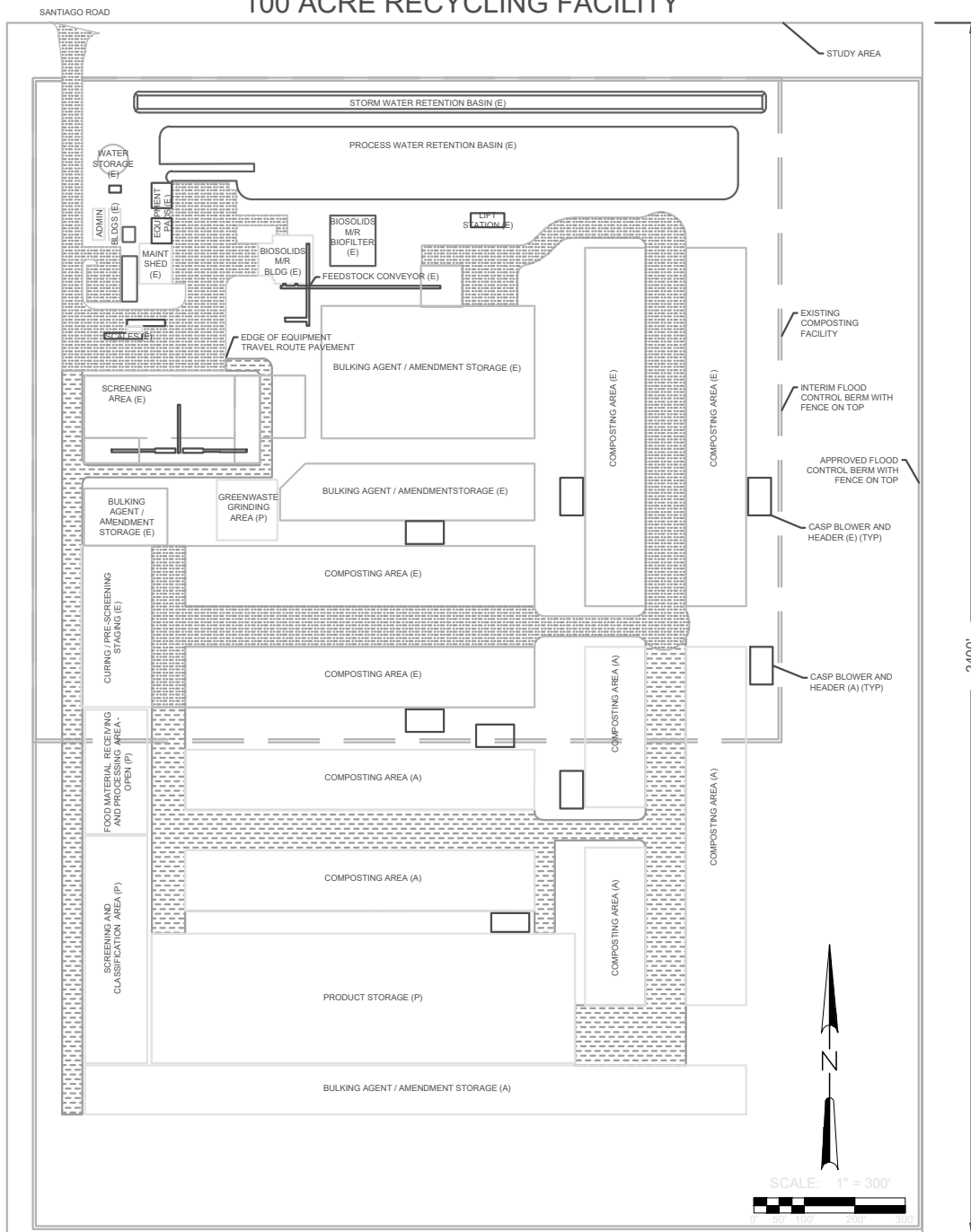
Facility and Operations

The existing Facility includes perimeter fencing with a gated entrance, scale(s), internal access roads, maintenance area including onsite truck wash area, administration building space, receiving building/mixing equipment area, compost additive temporary storage area and finished product area. The proposed project would not change the annual 670,000-ton capacity of the facility. The amount of feedstocks received at the site would vary depending on the feedstock and blend ratio.

Business Hours

The Facility currently operates 24 hours per day, 7 days per week, which would not change under the CUP modifications. Employees are onsite 24 hours per day. Within a 24-hour time period there are currently 14 employees working at the Facility including truck drivers who are needed to deliver materials. Employee numbers may vary seasonally or change due to business needs and are expected to grow to 60 employees at full operation.

CONCEPTUAL SITE PLAN 100 ACRE RECYCLING FACILITY



LEGEND

EXISTING EQUIPMENT TRAVEL ROUTES
 CONCEPTUAL FUTURE EQUIPMENT TRAVEL ROUTES

- APPROVED CUP BOUNDARY - 100 ACRES
- FACILITY AREA (DEVELOPED) - 44 ACRES
- APPROVED FUTURE FACILITY AREA - 56 ACRES
- (E) - EXISTING
- (A) - APPROVED, NOT YET CONSTRUCTED
- (P) - PROPOSED

- NOTES:**
1. PROPOSED CUP AMENDMENT DOES NOT EXPAND PRIOR APPROVED 100 ACRE SITE
 2. FUTURE COMPOSTING AREA IS FOR PRESENTATION PURPOSES - NOT FOR CONSTRUCTION
 3. FUTURE EQUIPMENT TRAVEL ROUTES SHOWN IN EXISTING COMPOSTING AREA FOR PRESENTATION PURPOSES - NOT FOR CONSTRUCTION

SOURCE: Total Compliance Management, 2018



Traffic

Traffic control is maintained to ensure that vehicle traffic into, on, and out of the site minimizes interference and safety issues for individuals in vehicles and on-site and for traffic on Santiago Road. Trucks used to haul materials are over the road (“OTR”) trucks with either end-dump, live floor or walking floor trailers with a 25 to 100 cubic yards (“cy”) capacity to transport operational materials. The Facility is currently permitted to receive a maximum of 354 average daily trips (ADTs) made by vehicles entering and leaving the project site. The new feedstocks would then be transported in the same or similar types of equipment with similar payloads. As a result, the maximum ADTs would not change because of modifications to the CUP.

CASP System

The Facility uses a CASP system which uses piles to compost a mixture of biosolids, pre-consumer food waste and bulking agents. In the CASP system, air is drawn or pushed through the pile using low pressure-high volume blowers and a piping system which allows for capture and or/conveyance of process air to the odor control device. Both odors and VOC’s emissions are controlled by either a finish compost layer covering the pile or a biofilter.

Biosolids, food material, organics, and bulking agents’ green material (collectively the “feedstocks” as further defined below), are unloaded from the delivery trucks into their respective location at the Facility. Biosolids are unloaded in the biosolids receiving building, while pre-consumer food waste and bulking agents are unloaded at the amendment storage area. The feedstocks are loaded into mixers at a 1:1 ratio of bulking agents to biosolids/pre-consumer food waste, then blended (“Blended Material”).

The Blended Material is staged on a feedstock pad and transported by front-end loader and/or dump trucks to the Primary CASP Staging Area which consists of the Primary CASP Staging Area and the Primary CASP Zones. The Primary CASP Staging Area and Primary CASP Zones are separated by two 15-foot haul roads on either side of the Primary CASP Staging Area. The blended materials may be placed in the Primary CASP Staging Area for temporary storage or may be placed in piles directly into the Primary CASP Zones. In the event that the mixed materials are placed in the Primary CASP Staging Area for more than 72 hours, a minimum 12-inch layer of finished compost is added to the staged piles in order to minimize odor potential.

Once the piles are formed, they remain stationary until the primary composting process is complete (about 20 days). Currently, each compost pile is permitted a maximum height of 15 feet (Resolution No. 2002-421) and has an approximately 12-inch thick (maximum) underlying base of coarse additive (also known as the air plenum layer) underneath. While the compost sits in piles during the primary composting process, the aeration system supplies air under the piles to provide the aerobic conditions required for the compost process. The aeration system also assists with the control of odors and reduces the potential for anaerobic conditions that can increase production of odors. This aeration process increases the oxygen in the compost piles, which helps in the reduction of odors and vector attractants, reduces fugitive dust, and requires shorter processing than other composting methods.

Emissions created during the composting process also are controlled within the approximately 18- to 24-inch thick biofilter cover caps on top of the compost piles in the CASP zone. Temperature control of the composting piles is achieved by daily measurements, a feedback control system, or by varying

the time period of aeration. Once the proper time, temperature, pathogen and vector attraction reduction requirements are met, then the primary composting process is deemed complete. This process is pursuant to *40 CFR part 503 – Standards for the Use or Disposal of Sewage Sludge*, which requires all sewage sludge materials to meet standards in accordance with the Clean Water Act (CWA) for pollutant limits and establishes reporting requirements, by which the preparer of the sewage sludge must adhere.

The final compost product is marketed to agricultural producers to accommodate the seasonal fluctuations in the compost market and crop rotation. Because the project proponent markets greater than 1,000 cubic yards of compost annually, the compost is tested for metal content, pathogens, and nitrogen in accordance with State and federal regulations before distribution. The proposed project would allow the storage of finished compost for up to 180 days following completion of composting as allowed by the existing RWQCB permit.

The CASP system used is specifically designed to positively aerate the bed, which enhances the speed of composting, while providing VOC, greenhouse gas and odor controls. The CASP system is modular and can process not only the existing biosolids feedstock, as well as the proposed food waste and green waste feedstocks. The existing CASP system provides process airflow to control and maintain uniform biomass temperatures and all process air exhausts through a biofilter. All components in contact with the corrosive air-stream of the compost are either stainless steel or polymeric materials. The CASP system is designed to conserve energy with variable speed fans and adaptive control strategies. Manually operated dampers control airflow and direction to each pile/zone. The CUP Modification would not result in changes to the existing CASP system.

Expanded Feedstocks

The CUP Modification is needed to and would authorize the Facility to accept additional types of ‘mixed materials’ and organic wastes consistent with the new regulations (AB 1826 and SB1383) that have changed the requirements for disposal of organic waste as well as expanding the list of organic wastes that can be accepted at a Compostable Materials Handling Facility. The additional types of “mixed materials” and organic wastes would include all types of food material (including post-consumer food waste, food-soiled paper, compostable plastics) and digestate consistent with current regulations. Based on this, the CUP would expand the list of acceptable materials that can be received by the composting Facility and includes:

- ‘Mixed Materials’ pursuant to Title 14, California Code of Regulations (CCR);
- ‘Food Material’ pursuant to Title 14 CCR; and
- ‘Organic Wastes’ pursuant to SB 1383 regulations

The Facility currently accepts wood chips and agricultural waste products as bulking agents. These bulking agents, under current regulations, are also considered organic wastes. In order to be consistent with current regulation the following “Bulking Agents” are being included in the CUP modification and include the following:

- ‘Agricultural Materials’ pursuant to Title 14 CCR; and
- ‘Green Materials’ pursuant to Title 14 CCR

The proposed project would be authorized to receive and handle any “compostable material” or “digestate” as authorized under the then current regulations, existing permits or modified permits. The following definitions are consistent with current and future state regulations as administered by CalRecycle and the State Water Resources Control Board as defined in the California Code of Regulations and SB 1383. Any feedstocks approved to be processed at the Facility would comply with all applicable regulations. **Table 3-2, *Feedstock Definitions for Feedstocks to Be Accepted under the Project***, provides a description of the feedstocks the Facility would be authorized to receive and compost.

Table 3-2: *Feedstock Definitions for Feedstocks to be Accepted under the Project*

<i>Feedstocks</i>	<i>Description</i>
Agricultural Materials	Waste material of plant or animal origin, which results directly from the conduct of agriculture, animal husbandry, horticulture, aquaculture, silviculture, vermiculture, viticulture and similar activities undertaken for the production of food or fiber for human or animal consumption or use, which is separated at the point of generation, and which contains no other solid waste. With the exception of grape pomace or material generated during nut or grain hulling, shelling, and processing, agricultural material has not been processed except at its point of generation and has not been processed in a way that alters its essential character as a waste resulting from the production of food or fiber for human or animal consumption or use. Material that is defined in this Section 17852 as “food material” or “vegetative food material” is not agricultural material. Agricultural material includes, but is not limited to, manures, orchard and vineyard prunings, grape pumice, and crop residues. (Title 14 CCR §17852, or as may be amended)
Food Material	A waste material of plant or animal origin that results from the preparation or processing of food for animal or human consumption and that is separated from the municipal solid waste stream. Food material includes, but is not limited to, food waste from food facilities as defined in Health and Safety Code Section 113789 (such as restaurants), food processing establishments as defined in Health and Safety Code section 111955, grocery stores, institutional cafeterias (such as, prisons, schools and hospitals) and residential food scrap collection. Food material does not include any material that is required to be handled only pursuant to the California Food and Agricultural Code and regulations. (Title 14 CCR §17852, or as may be amended)
Digestate	Organic by-product (solid or liquid) of anaerobic digestion process.
Green Material	Any plant material except food material and vegetative food material that is separated at the point of generation, contains no greater than 1.0 percent of physical contaminants by dry weight, and meets the requirements of section 17868.5. Green material includes, but is not limited to tree and yard trimmings, untreated wood wastes, natural fiber products, wood waste from silviculture and manufacturing, and construction and demolition wood waste. Green material does not include food material, vegetative food material, biosolids, mixed material, material separated from commingled solid waste collection or processing, wood containing lead-based paint or wood preservative, or mixed construction and demolition debris. Agricultural material, as defined in this section

Table 3-2: Feedstock Definitions for Feedstocks to be Accepted under the Project

Feedstocks	Description
	17852(a)(5), that meets this definition of “green material” may be handled as either agricultural material or green material. (Title 14 CCR §17852 or as may be amended)
Mixed Material	Any compostable material that is part of the municipal solid waste stream, and is mixed with or contains non-organics, processed industrial materials, mixed demolition or mixed construction debris, or plastics. A feedstock that is not source separated or contains 1.0% or more of physical contaminants by dry weight is mixed material (Title 14 CCR § 17852, or as may be amended).
Organic Wastes	Solid wastes containing material originated from living organisms and their metabolic waste products, including but not limited to food waste, green waste material, landscape and pruning waste, applicable organic textiles and carpets, wood, lumber, fiber, paper products, printing and writing paper, manure, biosolids, digestate, and sludges. (SB 1383 or as may be amended).

Source of Feedstocks

The feedstocks for the proposed project would generally be received from sources throughout California, but most likely from central and southern California, including, but not limited to, the Central Coast [Santa Barbara and San Luis Obispo Counties), Kings County, Fresno County and as far south as San Diego County and as far north as Sacramento County. Due to their population and land areas, the cities that are most likely to supply the greatest amount of feedstock include Santa Barbara (approximately 55 miles southwest) and Santa Maria (approximately 67 miles west) in Santa Barbara County; San Luis Obispo (approximately 79 miles west) in San Luis Obispo County; Hanford (approximately 83 miles north) in Kings County; Fresno (approximately 114 miles north) in Fresno County; and San Diego (approximately 204 miles south) in San Diego County; and Sacramento (approximately 263 miles north) in Sacramento County.

New Feedstock Processing

The modification to the CUP would permit the Facility to transition from handling only biosolids and pre-consumer food waste to handling all of the new feedstocks, including biosolids and pre-consumer food waste consistent with current State regulations, and any future amendments to State recycling regulations. Currently, the Facility receives biosolids, green waste and pre-consumer food material that has been pre-processed at facilities outside Kern County. The biosolids are handled inside the existing biosolids handling building. The green waste and pre-consumer food waste is received in the amendment storage areas and mixed with the biosolids as a bulking agent. The Facility would continue to receive these pre-processed materials, but as proposed, the Facility would be allowed to receive both pre-processed feedstocks as well as unprocessed feedstocks. The modification to the CUP would authorize the Facility to incorporate new equipment to handle and process the new Feedstocks.

Once the feedstock is sorted, ground, and prepared, it would be composted using the existing CASP system, which was discussed in detail previously. As needed and as determined by the demands of

the composting process, feedstocks could be comingled into the existing biosolids or they could be separated and processed individually.

To accomplish the above and enable receipt and processing of the expanded feedstocks, as well as manage the compost as it is removed from the CASP system, the Facility would incorporate the following practices:

- Processing equipment and area to support receipt of food material, mixed material, and organic waste;
- Processing equipment and area to support receipt of green materials;
- Increased height of all piles from 15 feet to 20 feet to accommodate seasonal variations;
- Post-Composting screening to size and classify compost; and
- Onsite conveyance connecting process areas and transport material.

New Processing Equipment

To facilitate the new processing procedures and to comply with the aforementioned regulation, new food material processing equipment would be required. Some food waste, up to approximately 30%, could be contaminated with non-compostable materials, and these materials would require separation. Although source controls are used, food waste may be comingled with other materials. Additional compost screening and classification equipment would be required at the Facility and permitted by the modification of the CUP. After being weighed, incoming trucks would transport the materials to the dedicated receiving and storage area. At this point, vector (pest) controls would be employed prior to being placed into the comingled materials separation process. The Facility would use a state-of-the-art extruder-type food processing technology to pre-process up to an estimated 386,000 wtpy of food materials. The food materials would be loaded with a front-end loader, or other suitable equipment, into the extruder feed bin. The extruder would pre-process the materials before the compostable material would be transported and amended for composting in the CASP system. The goal is to reduce contamination to less than 1% prior to mixing with green waste and or bulking agents before the materials are put into the CASP system. The mechanically separated non-compostable waste would be disposed of off-site at a permitted solid waste disposal site or transported off-site for recycling or beneficial reuse.

To accommodate the processing of food materials, feedstocks received at the Facility would be processed and prepared for the CASP system. Even when best management practices are applied at the source, comingled food materials may also contain non-compostable contamination. For this reason, processing equipment is needed to further separate the waste materials. Trucks would transport food materials to the Facility where they would be weighed on certified scales. The trucks would then travel to the dedicated receiving and storage area where the material would be offloaded. Vectors would be controlled by good housekeeping practices in the reception area and unprocessed material would be covered when pre-processing is not occurring.

New Green Waste Grinding Equipment

The Modification to the CUP would authorize the use of additional grinding equipment that would be needed to process green waste prior to composting. After the green waste materials are received

they would be ground and then processed through a screen or similar equipment to prepare for use as a bulking agent in the compost process. To accommodate this process, additional equipment, such as a grinder, conveyors, and shaker deck, could be installed on the project site. The proposed project plans to allow for storage of up to 5,000 cubic yards of un-processed green waste. All green waste receiving, storage, and grinding would occur on-site. The area would have year-round loader access, to transfer processed green waste.

Prohibited Materials

The Modification to the CUP would not change the list of materials the Facility is prohibited from receiving and the Facility would maintain its existing Solid Waste Facility Permit. The following types of wastes are currently prohibited and would continue to be prohibited:

- Hazardous, radioactive, designated, and medical wastes;
- Dead animals, septage, ash, painted or treated wood;
- Mixed (municipal) solid waste and construction and demolition materials;
- Burning material;
- Manure from known infected herds or sources as monitored and reported by the CDFA;
- Any sewage that has not been treated.

Circulation and Access

The Facility is located approximately seven miles west of I-5. It is anticipated that most materials would be transported along I-5 and then northerly on Old River Road to the intersection with Millux Road. From Millux Road, the feedstock would be transported westerly to the intersection with Hill Road, then southerly toward the project site via South Lake Road and ultimately arrive at the site from Santiago Road. Trucks hauling New Feedstocks to and from the Facility would comply with diesel engine requirement standards established by the California Air Resources Board (CARB) and local air pollution control districts. The modification to the CUP would not change any existing truck routes established by the Existing CUP.

Potable Water Supply and Distribution

Potable water and water used at the Facility is supplied by groundwater from private wells. The existing infrastructure is in place to supply the proposed project with water needed for both potable water for employees as well as water needed to facilitate the composting process. No new construction for supply water is proposed.

Wastewater Collection and Reclamation

Sanitary wastewater generated from the Facility is treated by an existing septic system and is in place to continue to treat wastewater. A sewage treatment plant was included as a part of the SKICSP, but it has not yet been constructed. No new construction related to sanitary wastewater treatment facilities or infrastructure is proposed.

On-Site Stormwater Drainage

The Facility captures all stormwater and process water through an existing drainage system and all stormwater would be managed in accordance with RWQCB requirements. The Facility operates under the current National Pollution Discharge Elimination System (NPDES) Permit consistent with all public safety requirements. Stormwater runoff generated from the proposed project site would be collected on-site and drained to the existing stormwater conveyance system. No new construction of storm water drainage facilities either on-site or off-site are proposed.

Dry Utilities

Utilities including gas, electricity are provided by Southern California Gas Company (SCGC) and Pacific Gas & Electric (PG&E). Phone and cable services are already provided to the project site by existing service providers. These services would continue to be provided to the project site by existing distribution facilities and lines. No new construction either on-site or off-site is proposed.

Construction

The Proposed Project does not include construction of new facilities, however new processing, grinding and odor/vector control equipment would be installed to enable acceptance of the new feedstocks proposed as part of the proposed CUP modification. The proposed project does not alter or change the boundaries of size of the previously approved 100-acre composting site. The Facility was previously analyzed to expand and operate at full capacity on the entire 100-acre site. The expansion of the compost operation onto the full 100 acres site may still occur and would be constructed in accordance with the Existing CUP and enable the use of new processing procedures under the modified CUP to meet legislative requirements.

Solid Waste and Non-Hazardous Materials

The proposed project does not include new construction and generation of solid waste from construction or demolition would not occur. The Facility would continue to be served by a private waste hauler that directs the waste to the public landfill or transfer station to be recycled and/or disposed.

Hazardous Materials

The proposed project does not include new construction that would entail the use of hazardous materials. Existing operations would continue and include the use of gasoline, diesel fuel, oils, lubricants, solvents, detergents, and degreasers needed to operate machinery and conduct repairs of existing facilities, infrastructure, and equipment. The existing Facility operates under a hazardous materials business plan (HMBP) on-file with the Kern County Environmental Health Services Division/Hazardous Materials Section. The HMBP includes a complete list of all materials used on-site and information regarding how the materials are transported and in what form they would be used. This information has been recorded to maintain safety and prevent possible environmental contamination or worker exposure. If operation of the new processing and grinding equipment includes materials would require the use of materials or require potentially hazardous maintenance protocols not already identified in the HMBP, it would be updated and filed with the County.

3.5 Entitlements Required

Kern County, as the CEQA Lead Agency for the project, has primary discretionary approval authority over the project. The project would also be required to obtain, at a minimum, the following discretionary permits/approvals included in **Table 3-3, Proposed Discretionary Actions/Required Approvals**.

Table 3-3: Proposed Discretionary Actions/Required Approvals

Agency	Required Approval
<i>Local</i>	
Kern County	<ul style="list-style-type: none"> • Consideration and certification of Final EIR • Adoption of 15091 Findings of Fact and 15093 Statement of Overriding Considerations (if required) • Adoption of Mitigation Measure Monitoring Program • Approval by the Kern County Planning Commission for proposed conditional use permits for the project site • Approval of Grading Permits (when required) • Approval of Building Permits (when required)
Kern County Environmental Health Services Department, acting as the Local Enforcement Agency for CalRecycle (“LEA”)	<ul style="list-style-type: none"> • Approval of modification to Solid Waste Facilities Permit • Approval of modification to Odor Impact Minimization Plan • Approval of modification to Report of Compost Site Information (RCSI)
Kern County Environmental Health Services Department, Certified Unified Program Agency (CUPA)	<ul style="list-style-type: none"> • Approval of updated Hazardous Materials Business Plan • Approval of updated Spill Prevention Control and Countermeasure Plan
Kern County Fire Department	<ul style="list-style-type: none"> • Approval of modification to Fire Safety Plan (as required)
Kern County Public Works, Building and Development, Floodplain & Survey	<ul style="list-style-type: none"> • Approval of Grading and Building Plans (when required)
<i>Regional</i>	
Central Valley Regional Water Quality Control Board (Central Valley RWQCB)	<ul style="list-style-type: none"> • Approval of modification to Waste Discharge Requirements
San Joaquin Valley Air Pollution Control District (SJVAPCD)	<ul style="list-style-type: none"> • Authority to Construct for changes in process • Permit to Operate for new Feedstocks

Table 3-3: Proposed Discretionary Actions/Required Approvals

Agency	Required Approval
	<ul style="list-style-type: none"> • Approval of modification to Fugitive Dust Control Plan
<i>State</i>	
California Department of Resources Recycling and Recovery (CalRecycle) – In conjunction with LEA	<ul style="list-style-type: none"> • Approval of modification to Odor Impact Minimization Plan • Approval of modification to Solid Waste Facility Permit

3.6 Cumulative Effects Overview

CEQA requires that an EIR evaluate a project’s cumulative impacts. Cumulative impacts are a project’s impacts combined with the impacts of other related past, present and reasonably foreseeable future projects. As set forth in the CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence, however the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. As stated in CEQA, Public Resources Code, Section 21083(b) (2), “a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable.”

According to the CEQA Guidelines:

Cumulative impacts refer to two or more individual effects, which, when considered together, are considerable and which compound or increase other environmental impacts.

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (Title 14 CCR, Division 6, Chapter 3, §15355).

In addition, as stated in the CEQA Guidelines, it should be noted that:

The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable. (Title 14 CCR, Division 6, Chapter 3, Section 15064[I][5])

Cumulative impact discussions for each environmental topic area are provided at the end of each technical analysis contained within **Chapter 4**. As previously stated, and as set forth in the CEQA

Guidelines, related projects consist of “closely related past, present, and reasonably foreseeable probable future projects that would likely result in similar impacts and are located in the same geographic area” (CCR, Title 14, Division 6, Chapter 3, Section 15355). The cumulative study area is defined by a six-mile radius from the project site, see **Figure 3-6, Cumulative Study Area**.

Table 3-4, Cumulative Projects List, provides a list of past, present, and reasonably foreseeable future projects that are considered as part of the cumulative impact’s analysis within this EIR, and are within the cumulative study area of six miles. Certain resources use a larger geographic area; for those specific resources, additional cumulative information on geographic area and projects is provided within the EIR resource chapter. Finally, for some resources the cumulative analysis is based on projected growth within the project area or region.



SOURCE: Esri, USGS, 2021

Cumulative Study Area

Figure 3-6

Table 3-4: Cumulative Projects List

Name	Project Location	Request	Case Type Code	Map	Township/Range	APN	Acreage
Algonquin Power Company Attn Julian Ristow	Santiago Rd. And South Lake Rd.	EOT for Previously- Approved Cup 6, Map 158 (Resolutions 111-11, 112-11, And 113-11). SKIC Solar	CUP	158		20-110-79	0.00
Anterra Energy Services	Hwy. 166, East Of Maricopa	Nonhazardous Waste Treatment & Recycle Facility	CUP	205	11/22-4	239-080-75	0.00
Bonanza Farms/David Albers	Old River Rd, 2 Mi S/I-5	Dairy	CUP	159	32/26-14	295-100-03	3,811.00
Costamagna, Ernie/Macedo Eng'g	S/S So Lake Rd, 1/2 Mi W/Hill Rd	Dairy (Buena View)	CUP	159	32/26-17	295-040-36	1,285.00
Costamagna, Ernie/Macedo Eng'g	S/S S Lake Rd, 2.5 Mi E/Gdnr Fld Rd	Dairy (Gardner View)	CUP	158	32/25-29	220-170-07	1,124.00
Excel Minerals Co. Inc	Ptn Sec 28	Reclamation Plan	CUP	157			670; 380 Undisturbed
General Production Service	Sec 19, W Of Hwy 33	Temp. Batch Plant (Concrete)	CUP	157			
Gravis, Corky /Metro Ready Mix	Sec Enos Lane @ Union	Concrete Batch Plant	CUP	140	31/25-13	184-030-07	4.50
Hernandez, Jose	Gardener Field Rd.	Community Center	CUP	157	32/24-23	220-030-13	10.50
Klotz, Dwayne	Ptn Ne 1/4 Sec 7	Single Family Dwelling- MH	CUP	206			5.08
Maricopa Sun By Jeff Roberts	Maricopa Sun Solar Re-Activate	CUP	CUP	159	19/32-26		0.00
Massimo Freda	19300 Copus Road, Bakersfield	CUP For Alcoholic Apple Cider (Brewery)	CUP	158	32/25-36	220-160-40	9.60
Matthew Estrada	11006 Enos Lane, Bakersfield	A CUP For An Indoor Non-Lethal Simulated Firearms Training Facility	CUP	140		184-012-27	0.00

Table 3-4: Cumulative Projects List

Name	Project Location	Request	Case Type Code	Map	Township/Range	APN	Acreage
Mattivi Bros Leasing	Off Hwy. 166	Batch Plant - 3 Year Period	CUP	205	11/22-24	239-090-41	0.00
Palla Rosa Farms/ Livio Palla	Sec 25	Dairy	CUP	141			8.5
Pensco Trust Company Et. Al. (See Attachment)	Santiago Road	CUP For Solar Power Generation Facility	CUP	158	32/25-	220-110-61	118.459
Plantenga, George/L Wielenga	Ptn Sec 36	Dairy Extension of Time Extension of Time Deletion of Condition	CUP	141			10.0
Quan Phu By Roger Frymire (Vikon)	South Lake Road	Poultry Processing Plant	CUP		32/25-22	220-110-14	120.00
R. Wyatt Sanders Trust By T-Squared	23102 South Lake Rd. Taft, Ca 93268	CUP & Williamson Act Land Use Cancellation to Allow for the Development of A 253 Acre Solar Farm	CUP		32/25-20	220-120-09	253.00
R.T. Martin	13453 Olen Ave	CUP for Equestrian Facility	CUP	140		184-012-18	0.00
Responsible Compost Mng/Coffin, John	1 Mi S/Taft Hwy, 1/2 Mi W/I-5	Composting Facility	CUP	141	31/26-07	184-090-09	200.00
Roth, John	Milling & Screening Of Pumice		CUP	206			5.0
Rrt, Inc/Insight Eng'g Cons		Recycle Constr Materials	CUP	206			16.
Rrt, Inc/Insight Eng'g Cons	Wo # 98207	Permanent Batch Plant	CUP	206			51.0
Sattar, Mohammed	15751 Copus Rd Ptn Nw/4 Sec 32	Slaughter House	CUP	187			20.0
SKIC Development Company, LLC By Porter & Associat	South Lake Road & Santiago Road	CUP for Solar PV Facility	CUP	158	32/25-	220-110-55	321.0

Table 3-4: Cumulative Projects List

Name	Project Location	Request	Case Type Code	Map	Township/Range	APN	Acreage
Synagro/Elizabeth Ostoich	Modification Of Conditional Use Permit	Modification of Conditional Use Permit	CUP	158			0.00
T&R Enterprise Llc (Jordan Treaster/ Partner)	S/E Corner Of S Enos & Union Rd	Allow A Bulk Soil Amendment Storage	CUP	140	31/25-13	184-030-07	0.00
Vulcan Materials Company	16101 Hwy 166	SMARA For Expansion ff Existing Mine Site. EIR will be required	CUP	205			0.00
Schackman, Conrad & Scott By Wiley Hughes Survey	Sec Taft Hwy & Enos Lane	GPA To 7.1 ZC To M-1	GPA ZCC	140	31/25-01	184-010-82	18.12
Kenneth Kerr	Enos Lane And Hwy 119 Swc	8.4 To 6.3 A To M-1 8.4 To 6.3 A To M-1 Includes Exclusion to Ag Preserve as only the 10 Acres Was Excluded Not The 30	GPA ZCC	140	31/25-2	184-010-93	, 30.00
Jhaj, Rupinder/Pasquini Eng'g	Swc Taft Hwy (Sr 119) & Enos Ln	GPA To 6.2 Wo #98259 ZC To M-1 Pd Wp # 98259	GPA ZCC	140			19.
Mitchell, Mara	1.5 Mi S Route 119/ Enos Lane	ZC to E (2 1/2) & C-2	GPA ZCC	140	31/25-	184-010-75	80.00
Rrt, Inc/Insight Eng'g	Ptn Ne/4 Sec 8	GPA To 7.2 Wo 98207 ZC To Nr(5) Wo #98207	GPA ZCC	206			51.
San Joaquin Land And Cattle Co.	10131 Enos Lane	GPA From 8.3 To 7.1 ZCC From A To M-1 PD	GPA ZCC	140	31/25-02	184-012-47	39.15
West Side Waste/Sean Edgar	Ptn Sec 7; N/S Cedar St	GPA To 7.1 ZC To M-1 Pd	GPA ZCC	157			9.56
Maricopa Sun Llc	Lake Road Area	700 MW Solar Project	GPA CUP	158	32/25-19	220-110-08	6,046.00
Maricopa Sun Llc	Copus Ro Area, W Of I-5	700 MW Solar Project	GPA CUP	159	32/26-23	295-030-17	6,046.00

Table 3-4: Cumulative Projects List

Name	Project Location	Request	Case Type Code	Map	Township/Range	APN	Acreage
Bowles, Henry M	Nwc Golf Course Rd & Ironbark Rd	4.3 to 4.1 (Specific Plan)	SPA	140	31/25-08	184-020-52	120.15
Andrews, Don/Porter-Robertson	Ptn Sec 36	ZC to add FPS	ZCC	158			70.
Barton Bros. Farms/Simpson V C	Ne Cor Old River Rd & Maricopa Hwy	Mini-Mart Farm Off PD Plan	ZCC	204			3.52
Berry Petro. Co./Borton Et Al	2 1/2 Mi. S. Of Taft	ZC TO NR(20)	ZCC	157			160.
Berry Petroleum Co/Dewalt Corp	Hwy 33/2 Miles South Of Taft	TO NR (5)	ZCC	157	32/24-31	220-080-17	38.00
Chevron Usa/Kcpads	Sec 31	ZC TO NR(20) for production of petroleum and related uses	ZCC	189			640.
Corrosion Controls, Inc.		ZC TO M-2 for a machine shop and industrial uses	ZCC	157			10.25
Darryl Jones	N/Side Of Olen Ave, West Of Enos Ln	ZC from A to NR for oilfield service yard	ZCC	140	31/25-02	184-012-21	20.00
Glaser, Scott Et Al/Rwd&D	Se Cor I-5 & Taft Hwy	ZC to C-2 PD for highway commercial uses including convenience stores	ZCC	141			11.11
Glaser, Scott/Rwdd	PTN NE 1/4 SEC 6	ZC to A to support a condition of approval for a tentative parcel map	ZCC	141			28.
Greenlee, Jeffery/ Rwdd	11664 Valpredo Rd	ZC to add FPS for a 2.5-acre parcel home	ZCC	187			2.5
Jenkins, Larry & Debbie/D & D	N/2 NE/4 SEC 11	ZC TO NR(5) PD to support a PD office/warehouse	ZCC	140			80.35

Table 3-4: Cumulative Projects List

Name	Project Location	Request	Case Type Code	Map	Township/Range	APN	Acreage
Lewis, Ocie & Betty	PTN NW 1/4 SEC 35	ZC TO A for onsite farm labor and farm labor housing	ZCC	157			50.
Tenneco West Inc/S. G. Ladd	SEC 4	ZC TO ADD FPS to support condition of approval for parcel map	ZCC	204			461.43
Texaco Expl & Prod/Smith Tech	PTN SEC 10	PC: ZC TO NR(20)PD WO #99023A for oil field service business	ZCC	157			41.98
Valley Communities, Inc/S-V In	SW COR TAFT HWY & I-5	ZC TO C-2 PD for highway commercial uses including convenience stores	ZCC	141			64.
Wildlands Conservancy/R Abbott		ZC TO A WO #99214 for inclusion in a Williamson Act Land Use Contract	204				1,757.33
Wildlands Conservancy/R Abbott		ZC TO A inclusion in a Williamson Act Land Use Contract	206				1,752.33
Willow Brook, Llc/D & D	PTN S/2 SE/4 SE/4 SEC 22	ZC TO C-2 PD for commercial uses including a gas station and truck/rv parking	141				12.98
Gammon, William	SW/4 SEC 2	PC: ZC TO A B/S: ZC TO A WO #99017A to be eligible for Williamson Act Land Use Contract	206				156.97
Morton Recycling	PTN E/2 SEC 34	ZC to A Soil Recycling Facility-Non Haz	189				89.19

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Section 4.1 Aesthetics

4.1.1 Introduction

This section discusses impacts associated with the potential for the proposed project to degrade the existing visual character or quality of the site and its surroundings through changes in the existing landscape. Aesthetics refers to visual considerations in the physical environment. Potential effects are evaluated relative to important visual features (e.g., scenic highways, scenic features), and the existing visual landscape and its users and are evaluated under the California Environmental Quality Act (CEQA) thresholds.

Degradation of the visual character of a site is typically addressed through a qualitative evaluation of the changes to the aesthetic characteristics of the existing environment that would result from implementation of a project. Degradation to the visual environment can result from changes that alter the visual setting. Because a person's reaction and attachment to a given viewshed are subjective, visual changes inherently affect viewers differently. Accordingly, aesthetics analysis, or visual resource analysis, is a systematic process to logically assess visible change in the physical environment and the anticipated viewer response to that change. The balance of this chapter describes the existing landscape character of the project site, existing views of the surrounding area from various on-the-ground vantage points, the visual characteristics of the project site, and the changes to the landscape that would result from implementation of the proposed project, as seen from various vantage points.

Visual Concepts and Terminology

The following terms and concepts are used to describe and assess the aesthetic setting and impacts from the proposed project in the discussions below.

Key Observation Point (KOP). One or a series of points on a travel route or at a sensitive use area, such as a residence, where the view of a project would be the most revealing.

Sensitive Receptors. Sensitive receptors are viewers that have a particular attachment or expectation of a view of or toward a given object or objects. Viewer sensitivity and their responses to visual settings are inferred from a variety of factors, including distance and viewing angle, types of viewers, number of viewers, duration of view, and viewer activities. Viewer sensitivity can vary based on the viewers activity or where they are located, such as in a recreational, residential, commercial, military, or industrial setting. Viewer activities such as engaging in recreation may encourage the viewer to observe the surroundings more closely versus one that may discourages close observation such as commuting in heavy traffic. Viewers in recreational areas are considered to have high sensitivity to visual resources. Residential viewers generally have moderate sensitivity but extended viewing periods. Viewers in commercial, military, and industrial areas are considered to have low sensitivity.

Scenic Highway. Any stretch of public roadway that is designated as a scenic corridor by a federal, State, or local agency.

Scenic vista. An area that is designated, signed, and accessible to the public for the express purposes of viewing and sightseeing. This includes any such areas designated by a federal, State, or local agency. Scenic vistas can also include an area that is designated, signed, and accessible to the public for the express purposes of viewing and sightseeing.

Viewshed. The viewshed for a project is defined as the surrounding geographic area from which the project is likely to be seen, based on topography, atmospheric conditions, land use patterns, and roadway orientations. “Project viewshed” is used to describe the area surrounding a project site where a person standing on the ground or driving a vehicle can view the project site.

Visual Sensitivity. When viewing the same landscape, people may have different responses to that landscape and any proposed visual changes, based upon their values, familiarity, concern, or expectations for that landscape and its scenic quality. Because each person’s attachment to, and value for, a particular landscape is unique, visual changes to that landscape inherently affect viewers differently. Nonetheless, generalizations can be made about viewer sensitivity to scenic quality and visual changes in the environment.

Visual or aesthetic resources are generally defined as both the natural and built features of the landscape that contribute to the public’s experience and appreciation of the environment. Depending on the extent to which a project’s presence would alter the perceived visual character and quality of the environment, a visual or aesthetic impact may occur.

Residents and recreational users (e.g., hikers, equestrians, tourists, and people driving for pleasure) are expected to have high concern for scenery and landscape character. People who are commuting daily through the same landscape generally have a moderate concern for scenery, while people working in the area (e.g., mining or commercial sites) generally have a lower concern for scenic quality or changes to existing landscape character.

The visual sensitivity of a landscape is affected by the viewing distances at which it is seen, such as close-up or far away. The visual sensitivity of a landscape also is affected by the travel speed at which a person is viewing the landscape. People moving through a landscape at a greater speed will generally have less time to view and concentrate on the visual and scenic environment.

The same feature of a project can be perceived differently by people depending on the distance between the observer and the viewed object. When a viewer is closer to a viewed object in the landscape, more detail can be seen, and there is greater potential influence of the object on visual quality because of its form or scale (relative size of the object in relation to the viewer). When the same viewed object is viewed at background distances, details may be imperceptible but overall forms of terrain and vegetation are evident, and the horizon and skyline are dominant. In the middle ground, some detail is evident in the foreground and landscape elements are seen in context with landforms and vegetation patterns in the background. The same levels of sensitivity apply in this case as with close-up and further away views—views from cars at high speeds would be less

sensitive to changes than views at low speeds because more details can be drawn from the landscape at lower speeds.

4.1.2 Environmental Setting

Regional Character

Kern County's geography is diverse, with mountainous areas, agricultural lands, and desert areas. Kern County consists of three general areas or regions – Valley Region, Mountain Region, and Desert Region. The County encompasses more than five million acres within these diverse geographic regions. The project site is located in the San Joaquin Valley Region, in the western portion of Kern County, California, and is outside the sphere of influence of any cities.

Valley Region

The San Joaquin Valley is located in the central portion of the County and is bounded by several intersecting mountain ranges that form a horseshoe shaped valley. Within unincorporated Kern County the Valley Regions major land uses include agriculture, oil extraction and production, and undeveloped and vacant land. While the majority of the area is undeveloped, the Valley Region does include the City of Bakersfield metropolitan area, which is the dominant urban area in Kern County. The area also contains more rural developments including the cities of Arvin, Delano, Maricopa, McFarland, Shafter, Taft, and Wasco.

The landscape of the Valley Region is mostly flat, lacking significant topographic relief, and tends to be visually monotonous because of the repetitive expanse of agricultural and extractive land uses. There is little variety of vegetative covers (i.e., grazing grasses, croplands, solitary trees, and residential landscaping) and few panoramic views.

There are viewsheds, however, that do afford visual receptors minor topographic relief in the form of mountainous terrain along the eastern, western, and southern edges of the San Joaquin Valley. These topographical elements are physiographically separated from the flat Valley floor and their summits and ridgelines are important focal points throughout Kern County. From certain vantage points, as one nears the edges of the Valley floor, mountainous topographic features rise abruptly from the ground plane, adding visual variety and dramatic focal points; this is considered high quality adjacent scenery.

While much of Kern County is rural and undeveloped, over the years, Kern County has experienced a great deal of urbanization, resource extraction, and renewable energy development. Urbanization has resulted in the introduction of numerous man-made modifications into the viewshed, including residential, commercial, and industrial uses; roadways and highways; and utilities to support development. In addition, mineral, oil, and natural gas extraction and agricultural activities are common to the region. Common visual elements include oil wells, storage tank batteries, access roads, utility infrastructure, barns and other agricultural-related buildings tend to dominate the visual landscape in the western Valley region. In general, the aesthetic features of the regional

visual environment are relatively uniform, with broad, flat landscapes leading to distant mountains and interspersed with urban, rural, and industrial development in varying densities and intensities.

State Scenic Highways

According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System, there are no Officially Designated State Scenic Highways within Kern County (see **Section 4.1.3, Regulatory Setting**, below for more information on the State Scenic Highway Mapping System). The California Scenic Highway Mapping System identifies State Route (SR)-14 north of Mojave, SR-58 east of Mojave, and an approximately 5-mile long segment of SR 41 in northwest Kern County as Eligible State Scenic Highways, which is distinct from an officially designated scenic designation. The project is located over 100 miles northwest of these Eligible State Scenic Highways. There are no Officially Designated State Scenic Highway in Kern County (Caltrans, 2019).

Local Character

The proposed project site is located off Santiago Road in the western region of unincorporated Kern County, California. The existing CUP boundary consists of a total of 100 acres, of which existing development occupies approximately 44 acres, with the remaining 56 acres intended for the proposed Modification. The project site is immediately accessed from Santiago Road, which is connected to Interstate 5 (I-5) approximately 7 miles to the west, via South Lake Road and Millux Road. On-site topography is relatively flat, and is approximately 320 feet above mean sea level (amsl). The City of Bakersfield is approximately 25 miles to the northeast, the City of Taft is located approximately 12 miles to the west. The unincorporated communities of Taft Heights and Ford City, located adjacent to the south and north of the City of Taft, also are located approximately 12 miles to the west and the unincorporated communities of Dustin Acres and Valley Acres are located approximately 10 miles northwest of the project site along State Route (SR) 119.

Existing development in the vicinity of the proposed project is sparse with a few industrial and commercial facilities, but the vast majority is undeveloped and used for agricultural production. The nearest sensitive residential receptors are located approximately 1.5 miles to the north of the project site. Residences in the areas surrounding the project site are rural in nature, sparsely developed, and associated with the surrounding agricultural uses.

The existing parcel is occupied by areas used for composting operations as well as undeveloped vacant land zoned for heavy industrial use. As noted above, of the 100-acre site, approximately 44 acres are comprised of the active composting facility which is enclosed by a berm and fencing and the remaining 56 acres are undeveloped land that is disked for vegetation and weed control. Within the existing compost facility, there are approximately 5 buildings and structures that consist of office, storage space, and receiving building for composting materials. All buildings are one story in height. Other visual elements within the existing facility consist of equipment, conveyors, machinery, and composting piles that are currently permitted to be a maximum of 15 feet in height (Resolution No. 2002-421).

The project parcel is surrounded by a solar farm to the west, south and east, and an oil and gas facility to the north across Santiago Road. The surrounding areas are dominated by undeveloped agricultural land that extend for miles out from the project site and the SKICSP boundary. There are no unique topographic features within the project site or surrounding areas. Views from off-site areas across the project site are marginally unobstructed due to the existing composting operations. Views of the mountains to the west and east are limited but may be visible on clear days. In addition, the San Emigdio Mountains to the south can be visible from the project site and this general part of the valley. The Kern River, which is considered a valuable visual resource is located approximately 9 miles to the north and the nearest major recreational area, the Buena Vista Aquatic Recreation Area (BVARA), is located approximately 6 miles to the north. Due to the relatively flat topography and distance, however, these two areas are not visible from the project site.

Lighting Environment

Light and Glare

Lighting effects are associated with the use of artificial light during the evening and nighttime hours. There are two primary artificial sources of light that includes light emanating from building interiors that passes through windows to the outside environment, and light from exterior sources such as street lighting, building illumination, security lighting, parking lot lighting, landscape lighting, and signage. Artificial light sources can be a nuisance as viewed from adjacent residential areas, and they can diminish the view of the clear night sky and cause disturbances to the nighttime environment. Light spill is typically defined as the presence of unwanted light on properties adjacent to the property being illuminated. With respect to lighting, the degree of illumination may vary widely depending on the amount of light generated, height of the light source, presence of barriers or obstructions, type of light source, and weather conditions.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light on highly polished surfaces such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. Perceived glare is the unwanted and potentially objectionable sensation as observed by a person as they look directly into the light source of a luminaire. Daytime glare generation is common in urban areas and is typically associated with buildings with exterior facades largely or entirely comprised of highly reflective glass. Glare also is produced during evening and nighttime hours by the reflection of artificial light sources such as automobile headlights. Glare generation is typically related to either moving vehicles or sun angles, although glare resulting from reflected sunlight can occur regularly at certain times of the year. Glare-sensitive uses include residences, hotels, transportation corridors, and aircraft landing corridors.

The existing composting facility occupies a total of 44 acres and is immediately surrounded by an existing solar energy electric generation facility, followed by predominantly undeveloped and highly disturbed agricultural land beyond the SKICSP boundary. The facility currently operates 24 hours a day and uses nighttime lighting to facilitate project operations during evening hours. The agricultural land surrounding the project site would not produce substantial glare, but sunlight reflecting off the solar panels to the east, south and west, depending on viewing angle and angle of the sun, would contribute to glare. To the north is an oil and gas facility that does use minimal

night-time lighting. Light that is produced from the project site would be visible to a minimal number of off-site viewers but would be visible to drivers on the nearby South Lake Road. Because the majority of the surrounding area is also vacant, there are no substantial light sources in the immediate vicinity. Additionally, because the surrounding areas are used for agriculture and industrial uses, no sensitive light receptors are located near the proposed project. The nearest sensitive receptor are the rural residential units located approximately 1.5 miles to the northeast.

4.1.3 Regulatory Setting

This regulatory framework identifies the federal, State, regional, and local statutes, ordinances, or policies that govern the light, glare, viewshed, and scenic character that must be considered by Kern County during the decision-making process for projects that have the potential to affect aesthetics.

Federal

National Scenic Byways Program

The National Scenic Byways Program is part of the U.S. Department of Transportation, Federal Highway Administration (FHWA). Under the program, the U.S. Secretary of Transportation recognizes certain roads as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, and scenic qualities (FHWA, 2020a). There are no National Scenic Byways or All-American Roads within the vicinity of the project site (FHWA, 2020b).

State

California Environmental Quality Act (CEQA)

CEQA Guidelines define a “significant effect” on the environment to mean a “substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance” (California Code of Regulations [CCR], Title 14, § 15382, 2010).

California Department of Transportation (Caltrans)

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program, which was created in 1963 by the California legislature to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The program includes a list of highways that are eligible for designation as scenic highways or have been designated as such. A highway may be designated as scenic based on certain criteria, including how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler’s enjoyment of the view. State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. As described in **Section 4.1.2, *Environmental Setting***, there are no Officially Designated State Scenic Highways within Kern County and the project site is not located directly adjacent to any Eligible State Scenic Highway.

Local

Kern County General Plan

The Land Use, Open Space, and Conservation Element of the Kern County General Plan evaluates the visual and aesthetic setting of Kern County and assesses the potential for visual impacts. The Kern County General Plan Circulation Element provides guidelines for development near Scenic Routes. A Scenic Route is defined in the Kern County General Plan as any freeway, highway, road, or other public right-of-way which traverses an area of exceptional scenic quality. A roadway can only be designated as a Scenic Route by direct action of the Kern County Board of Supervisors or the State of California. A route may not be selected as scenic until a visual assessment has been conducted to determine if the route meets the current scenic highway criteria as mentioned above, and to what extent development has encroached on the scenic views. In addition, the County must prepare and adopt a plan and program for the protection and enhancement of adjacent roadside viewshed land. As such, goals, policies and implementation measures regarding Scenic Routes in the Circulation Element are focused toward the need for the County to further develop their Scenic Route program and measures to protect scenic resources, which are not applicable to the project.

The Kern County General Plan acknowledges the three routes identified as part of the California Scenic Highways Master Plan that are designated “Eligible State Scenic Highway” within the County. Route 1, which begins north of Mojave and continues to the Inyo County Line, consists of State Route 14 and State Highway 395. Route 2 consists of State Route 58 between Mojave and Boron. Route 3 consists of 5 miles of State Route 41 in northwest Kern County. The project site would not be visible from any of these routes.

The Kern County General Plan Circulation Element also identifies several local scenic routes within Kern County; however, none of the local scenic routes (i.e., along State Route 14 and State Highway 395, State Route 58, and State Route 41) are in proximity to the project site. The Kern County General Plan Program EIR does identify I-5 as a scenic route and lists the sites of interest near this route, including the Edmonston Pumping Plant, Sebastian Indian Reservation, Fort Tejon, Top of Grapevine Pass, Frazier Park, Big Trees, Mt. Cerro Noroests (Mt. Abel), and Bitter Creek National Wildlife Refuge. This route is approximately 7 miles from the project site and begins near the project site at Grapevine on I-5 and extends south to Frazier Mountain Park Road, and continues west to SR-33, where it turns north and ends in Maricopa.

As part of the Kern County General Plan Circulation Element goals, policies, and implementation measures, Kern County adopted a Scenic Corridor (SC) Combining District to designate areas which contain unique visual and scenic resources as viewed from a major highway or freeway. The project site is not within a Scenic Corridor Combining District.

The Kern County General Plan provides general goals and policies for design features of development projects in order to reduce their impacts to scenic resources. The policies and implementation measures in the Kern County General Plan for aesthetic resources applicable to the project are provided below. The Kern County General Plan contains goals, policies, and implementation measures that are more general in nature and are not specific to development such

as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

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

Section 1.4 Public Facilities and Services

Implementation Measures

- **Implementation Measure E.** Continue to establish coordinated efforts between government entities and private enterprise to identify and preserve unique scenic qualities of existing natural resources and to enhance the image of the County as a whole.

Policies

- **Policy 2.** The efficient and cost-effective delivery of public services and facilities will be promoted by designating areas for urban development which occur within or adjacent to areas with adequate public service and facility capacity.

Section 1.8 Industrial

Goals

- Promote the future economic strength and well-being of Kern County and its residents without detriment to its environmental quality.

Policies

- **Policy 6.** Encourage upgrading the visual character of existing industrial area through the use of landscaping, screening, or buffering.
- **Policy 7.** Require that industrial uses provide designed features such as screen walls landscaping, increases height and/or setback, 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.

Section 1.10.7 Light and Glare

Policies

- **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.

Implementation Measures

- **Implementation Measure AA.** The County shall utilize CEQA Guidelines and the provisions of the Zoning Ordinance to minimize the impacts of light and glare on adjacent properties and in rural undeveloped areas.

Chapter 2. Circulation Element

Section 2.3.9 Scenic Route Corridors

Goals

- To safeguard values while improving the County's image

- To preserve a network of scenic routes interconnection much of the scenic land in the County. Benefits from the establishment of scenic corridor protection measures will accrue to the County as a whole.

Implementation Measure

- **Implementation Measure D.** The County has adopted a Scenic Corridor (SC) Combining District to designate areas which contain unique visual and scenic resources as viewed from a major highway or freeway and for the regulation of off-site advertising signs, where the siting of such signs need to be reviewed on a case-by-case basis to safeguard the scenic qualities of the natural environment and the visual qualities of primary entranceways into the County.

Kern County Zoning Ordinance

Chapter 19.81, Dark Skies Ordinance (Outdoor Lighting)

Kern County approved a Dark Skies Ordinance in November 2011. The purpose of this ordinance is to maintain the existing character of Kern County by requiring a minimal approach to outdoor lighting, recognizing that excessive illumination can create a glow that may obscure the night sky, and excessive illumination or glare may constitute a nuisance. The ordinance provides requirements for outdoor lighting within specified unincorporated areas of Kern County to accomplish the following objectives:

- **Objective 1:** Encourage a safe, secure, and less light-oriented nighttime environment for residents, businesses, and visitors.
- **Objective 2:** Promote a reduction in unnecessary light intensity and glare and reduce light spillover onto adjacent properties.
- **Objective 3:** Protect the ability to view the night sky by restricting unnecessary upward ions of light.
- **Objective 4:** Promote a reduction in the generation of greenhouse gases by reducing wasted electricity that can result from excessive or unwanted outdoor lighting.

Kern County Development Standards

The Kern County Development Standards have specific regulations pertaining to lighting standards. Lighting shall be designed so that light is reflected away from surrounding land uses so as not to affect or interfere with vehicular traffic, pedestrians or adjacent properties.

Southern Kern Industrial Center Specific Plan (SKICSP)

The proposed project is within the South Kern Industrial Center (SKIC). The SKIC consists of approximately 744 acres which are planned for in the SKIC Specific Plan (SKICSP). The SKICSP is located approximately 18 miles southwest of Bakersfield and approximately 7 miles east of Taft, in unincorporated Kern County. The composting Facility was approved by Kern County under Conditional Use Permit No. 2, Map No. 158 (“Existing CUP”) on October 22, 2002 (Resolution

No. 2002-421), along with a Supplemental Environmental Impact Report which was certified on the same date (collectively “Existing Entitlements”). Subsequent to the approvals, the Facility underwent construction and began operations in 2006.

The SKICSP was designed to achieve three primary goals; implement the Kern County General Plan, establish of development standards, and guide the planned development of the SKIC. The SKICSP contains general goals related to orderly growth and development, coordinated development with the Kern County General Plan, including instilling a positive identity to the development area. The SKICSP includes policies related to some visual elements such as the use of fences, hedges, and walls such that conformance to the Kern County Zoning Ordinance is maintained. In Kern County, specific plans, such as the SKICSP, are used to implement goals, objectives, and policies of the General Plan in a more detailed and refined manner unique to a smaller area of the County. Accordingly, the applicable goals and policies, within the SKICSP, are consistent with those contained in the applicable policies, goals, and implementation measures of the Kern County General Plan. Applicable policies related to Aesthetic Resources were located in SKICSP General Overview Policies as well as the Land Use section. Both policies were listed as Policy 9 in their respective chapters and are shown below;

General Overview Policies from the SKICSP

Policy 9: All fences, hedges, and walls shall conform to the requirements of the Kern County Zoning Ordinance except where the approved requirements of the Specific Plan's jurisdiction are more restrictive. In such cases, the requirements of the Specific Plan shall be used.

Land Use Goals and Polices from the SKICSP

Policy 9: Encourage improving the visual character of heavy manufacturing and industrial areas through the use of landscaping and screening of storage areas.

4.1.4 Impacts and Mitigation Measures

Methodology

In general, the potential character, quality, light, and glare impacts associates with projects are evaluated on a qualitative basis. The potential impacts to visual resources within the vicinity of the project site were qualitatively evaluated based on the following criteria: (1) existing visual quality and scenic attributes of the landscape; (2) location of sensitive receptors in the landscape; (3) assumptions about receptors' concern for scenery and sensitivity to changes in the landscape; (4) the magnitude of visual changes in the landscape that would be brought about by implementation, construction, and operation of the proposed project; and (5) compliance with State, County, and local policies for visual resources; and (6) the significance threshold questions in relation to aesthetics contained in Appendix G of Kern County's CEQA Implementation Document and Environmental Checklist.

Viewing Locations

Existing land uses in the project area include vacant land, land used for solar energy, oils and gas facilities, roadways, and a rail line along South Lake Road. South Lake Road and Santiago Road are the only public roadways adjacent to or that provide views of the project site. All other lands immediately to the northeast, east, south, and southwest are occupied by largely undeveloped agricultural private lands spreading for miles away from the project site. The following paragraphs provide a description of the views toward the project site from surrounding locations; see **Figure 4.1-1, Project Site Views**.

Viewpoint 1 - Southward Views from South Lake Road

Views southward toward the project site from South Lake Road consist of flat vacant agricultural land and an oil and gas facility located north of the project site. An existing large-scale solar development is located to the south, east, and west of the composting facility and is visible from this viewpoint. South Lake Road runs at an angle northeasterly to southwesterly and is approximately 1,400 feet from the project site. Depending on a viewer's location on the roadway, views of the project site would be partially or completely obstructed by the tanks and equipment at the oils and gas site. Mountains within the Los Padres National forest are approximately 16 miles to the southwest are visible in the distance from this viewpoint. Views of the composting site from this vantage point would be of the main building of the facility as well as some of the existing equipment and compost piles. There are no prominent views of the project site from this location as significant features in the landscape are lacking.

Viewpoint 2 - Eastward Views from South Lake Road

Eastward views and northeasterly views from South Lake Road would largely be limited to motorists traveling in the northeasterly direction. Due to the angle of the roadway to the project site, view of motorists traveling to the southwest would be oriented away from the project site. Views of the project site from northwesterly travelers would be looking east of the roadway. These views are characterized by the existing solar farm as well as undeveloped fallow agricultural fields adjacent to South Lake Road. The project site is located approximately 1,400 feet east of the roadway and view of some of the existing structures and composting piles would be visible. Distant views of the Tehachapi Mountains located approximately 33 miles to the east are visible from this viewpoint.



SOURCE: Google Earth, 2020



Project Site Views

Figure 4.1-1

Viewpoint 3 – Northward Views from Copus Road

Immediately south and east of the SKICSP boundary are private agricultural lands with no public roadways. The nearest public roadway is Copus Road approximately 2.5 miles to the south of the project site. Copus Road runs east to west and travelers would have to look to the north to be able to see the project site. Due to the relatively flat topography, distance, and agricultural development, views of the project site and beyond would be minimal. In addition, there are no significant features in the landscape in this location or as seen across the project site.

By comparing the difference in visual quality from the baseline (“before”) conditions as described above to post-project (“after”) visual conditions, the severity of project related visual impacts can be evaluated.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact on Aesthetics.

Such an impact would occur if the proposed project would:

- 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 nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality; or
- d. Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.

The lead agency determined in the NOP/IS (see Appendix A) that the following environmental issues areas resulted in no impact and were scoped out of requiring further review in this Draft EIR. Please refer to Appendix A of this Draft EIR for a copy of the NOP/IS and additional information regarding the following impacts:

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

The project site is substantially developed with an existing composting facility. While the project site is not designated as a scenic vista, as defined by the County of Kern or any other local governing body, the incorporation of additional processing equipment to the facility may result in alteration to the existing viewshed. However, the entire site is extensively disturbed and mostly developed, new equipment would not add any substantial effect to the scenic vista. The project site is also approximately 9 miles south of the Kern River which has been described as the single most valuable visual resource in the southern San Joaquin Valley. The project site is also approximately 6.0 miles southeast of the Buena Vista Aquatic Recreation Area

(BVARA). Views of either feature are not anticipated to be significantly affected by the proposed project. There are no scenic resources identified within the immediate vicinity. No further analysis is warranted in the EIR.

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

There are no officially designated State or County Scenic Highways as defined by Caltrans, the County of Kern, or any other local governing body adjacent to or within the vicinity of the project site. Additionally, there are no rock outcroppings or known historic buildings in the vicinity of the project. Therefore, implementation of the proposed project would not result in any substantial effect to scenic resources. No further analysis is warranted in the EIR.

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

Light introduction can be a nuisance to adjacent residential areas and diminish the view of the clear night sky, and if uncontrolled, can disturb wildlife in natural habitat areas. New light sources are not included as part of the proposed project modifications to the CUP. The existing compost facility currently operates 24 hours a day. The light sources required to serve the project are existing. The modification to the existing CUP to add additional operations, equipment, and clarify feedstock definitions will not require additional lighting. Therefore, the proposed project would not add any substantial effect to light or glare. No further analysis is warranted in the EIR.

Project Impacts and Mitigation Measures

Impact 4.1-1: The project would substantially degrade the existing visual character or quality of the proposed project site and its surroundings.

The proposed project consists of a modification to the existing CUP and expansion of the active composting areas from 44 to a total of 100 acres within the existing permitted area. The proposed project would allow for the existing South Kern Compost Manufacturing Facility to receive additional feedstock as well as digestate in response to AB 1826, SB 1383, CalRecycle, and California State Water Resources Control Board; install new equipment to be used during pre-processing and post composting operations including, but not limited to grinders, electrical screens, etc.; increase all pile heights from 15 feet to 20 feet; and increase storage time of finished compost product from 7 to 180 days. Construction activities would occur within the existing 100- acre permitted site that include the existing composting facility and the 56 undeveloped acres that are already heavily disturbed. Construction equipment would include graders, bulldozers, loaders, and other typical equipment that would be used to prepare the site and for movement of composting materials. The project may include equipment staging and stockpiling of soils, but which would not conflict with the existing visual environment or context of the site. The expanded composting footprint was previously analyzed for the original CUP for the compost facility and the proposed modification to the CUP would also be consistent with the existing visual quality and character of the site and area. Therefore, construction impacts needed on-site would be short-term in nature,

would cease upon completion of construction and would not be considered a substantial intrusion to the visual environment.

The visual elements of the proposed project also would not conflict with the intended industrial nature of the existing and planned industrial land uses in the SKICSP. The project site is immediately surrounded by a solar energy electric generation facility to the east, south and west, and an oil and gas facility across Santiago Road to the north. While changes to the visual environment from project improvements as viewed from surrounding privately owned lands and public roadways would occur, as seen from these areas (see Viewpoint 1 through Viewpoint 3 discussed above), the changes in the context of the overall area would be minimal. Project implementation also would add additional equipment to the existing operations and all pile heights could be increased from 15 feet to 20 feet. These changes also are not considered substantial and would be consistent with the existing and surrounding land uses.

From off-site areas, on-site structures would remain visible and although the piles could be a maximum of four feet higher, the changes in the viewshed and appearance of the compost facility would not be substantially changed. The Composting Facility as viewed from South Lake Road is on relatively level ground and views from this roadway and across the site to distant areas would not be substantially changed. Because views of the surrounding areas consist primarily of vacant open space, agricultural land, the solar facility, and oil and gas facility, intermittent and short-term views from motorists along South Lake Road would not be substantially affected. The proposed changes would be consistent with the existing uses of the composting facility and surrounding environment.

Therefore, although the visual appearance of the proposed project site would be modified from what is currently existing, the visual qualities of the site and surroundings would not be substantially degraded. Accordingly, visual changes to the proposed project site and its surroundings are considered less than significant and mitigation is not required.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts and Mitigation Measures

As shown in **Chapter 3, Project Description, Table 3-4, Cumulative Project List**, there are 59 cumulative projects within a 6-mile vicinity of the project site. These have the potential to result in cumulative impacts to aesthetics when considered together with the project. The “scarcity” rating criterion is likely to be impacted by widespread development in the area, as unobstructed views of regional topographical features and undeveloped lands would be less available as acreage is developed.

The project would have less than significant impacts with regard to substantially degrading the existing visual character or quality of the site and its surroundings. As described above, the proposed project consists of a modification to the existing CUP that would allow for the existing South Kern Compost Manufacturing Facility to receive additional feedstock as well as digestate in response to AB 1826, SB 1383, CalRecycle, and California State Water Resources Control Board; install new equipment to be used during pre-processing and post composting operations including, but not limited to grinders, electrical screens, etc.; increase all pile heights from 15 feet to 20 feet; and increase storage time of finished compost product from 7 to 180 days. Both the existing composting facility and balance of the 100 acre project site are heavily disturbed and within a permitted industrial facility. On a cumulative project basis, the immediately surrounding areas have been developed with a solar facility to the east, south and west, and an oil and gas facility to the north and the proposed project is consistent with the existing surrounding environment. In addition, due to these existing development conditions, additional projects in the surrounding area are unlikely to result in cumulatively negative impacts on scenic quality because they also would be consistent with existing and designated industrial areas. All future projects would occur within this same visual environment that lacks scenic resources, and these projects also would not significantly impair views of any off-site scenic resources. Therefore, the proposed project's visual and aesthetic impacts are not to be cumulatively considerable in regard to visual and aesthetic resources when combined with impacts of other past, present, or reasonably foreseeable projects. Impacts would be less than significant, and mitigation is not required.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Section 4.2 Agriculture

4.2.1 Introduction

This section of the Environmental Impact Report (EIR) describes the affected environment and regulatory settings for agriculture and forest resources for the project. It also describes the impacts on agricultural and forest resources that would result from the implementation of the project, and includes mitigation measures that would reduce these impacts, where applicable. This section is based, in part, on information provided in the Kern County Agricultural Crop Report (2019) prepared by the Department of Agriculture and Measurement Standards and information from the California Department of Conservation (CDOC).

4.2.2 Environmental Setting

As described in **Chapter 3, Project Description**, the project site is an existing composting facility located at 2653 Santiago Road. The unincorporated communities of Taft Heights and Ford City, located adjacent to the south and north of the City of Taft, are located approximately 12 miles to the west. The unincorporated communities of Dustin Acres and Valley Acres are located approximately 10 miles northwest of the project site along State Route (SR-119). The composting facility operates under an existing conditional use permit (CUP) No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421). Operations within the CUP boundary account for 44 acres of the 100-acre site. The proposed modifications to the currently approved CUP would not increase volumes of materials allowed to be received and processed and would not change the total acreage permitted for operations, but would be expanded into the remaining permitted 56 acres. The project site is not used for agricultural production and is not forested.

Regional Setting

Kern County covers 5,224,258 acres, and as of 2018 included 874,028 acres of important farmland (including prime farmland, unique farmland, and farmland of statewide importance) and 1,854,640 acres of grazing land. According to the 2018 Kern County Agricultural Crop Report, agriculture in Kern County was worth \$7,620,697,900 in 2019, which is an increase of two percent from the 2018 crop value of \$7,465,847,000. The top five farming commodities for 2019 were:

- almonds including byproducts
- grapes
- citrus fresh and processing,
- pistachios
- milk market & manufacturing.

These commodities made up more than \$4.3 billion (72 percent) of the total value (Department of Agriculture and Measurement Standards, 2019).

Kern County is developing rapidly and ranks high on the list of California Counties with issues related to urbanization and the loss of farmland. As shown in **Table 4.2-1, 2016-2018 Land Use**

Conversion in Kern County, the California Department of Conservation found that 6,075 acres of Important Farmland, including all of the categories of important farmland, grazing land, and other land, were converted to non-agricultural uses between 2016 to 2018. Approximately 5,905 net acres were converted from agricultural and other uses to urban/built-up land from 2016 to 2018 (CDOC, 2018).

Table 4.2-1: 2016-2018 Land Use Conversion in Kern County

Land Use Category	Total Acres 2016	Net Acres Changed	Total Acres 2018
Prime Farmland	579,297	-5,362	573,935
Farmland of Statewide Importance	209,483	-1,160	208,323
Unique Farmland	91,323	447	91,770
Farmland of Local Importance	0	0	0
IMPORTANT FARMLAND SUBTOTALS	880,103	-6,075	874,028
Grazing Land	1,849,266	5,374	1,854,640
AGRICULUTRAL LAND SUBTOTAL	2,729,369	-701	2,728,668
Urban and Built-up-Land	159,178	5,905	165,083
Other Land	2,325,914	-4,389	2,321,525
Water Area	9,853	-815	9,038
TOTAL AREA INVENTORIED	5,224,314	0	5,224,314

Source: CDOC, 2018

According to the Kern Economic Development Corporation (KEDC), it is estimated that the total population of Kern County will reach 1,067,631 individuals in 2030, and 1.5 million by 2060, growing from a January 2020 population of approximately 917,553 (KEDC, 2021). The anticipated growth in population will most likely reduce the amount of agricultural land available in the County even further. However, it is important to note, the conversion of agricultural land is affected by a number of factors in addition to population growth and urban development. Actual production is dependent on commodity prices, water prices and supply, labor, the proximity of processing and distribution facilities, and pest management. Factors such as weather, trade agreements, and labor disputes can also affect decisions regarding what crops are grown and which lands go in and out of production. In addition, a significant amount of the important farmland in the County has been converted to grazing land over the past several years, which contributes to the overall loss of agricultural land in the County.

Local Setting

The proposed project site is located off Santiago Road in the western region of unincorporated Kern County within the South Kern Industrial Complex. Existing development in the vicinity of the proposed project is sparse with a few industrial and commercial facilities, but the vast majority is undeveloped and used for agricultural production. The existing parcel is occupied by areas used for

composting operations as well as undeveloped vacant land agricultural lands. Of the 100-acre permitted site, approximately 44 acres are comprised of the active composting facility which is enclosed by a berm and fencing, and the remaining 56 acres are undeveloped land that is disked for vegetation and weed control. Within the existing compost facility, there are approximately 5 buildings and structures that consist of office, storage space, and receiving building for composting materials.

The project parcel is immediately surrounded by a solar farm to the west, south and east, and an oil and gas facility to the north across Santiago Road. The surrounding areas are dominated by undeveloped agricultural land that extends for miles out from the project site. There are no unique topographic features within the project site or surrounding areas. The nearest residence for this project are residential uses approximately 1.5 miles to the north of the project site. Residences in the areas surrounding the project site are rural in nature, sparsely developed, and associated with the surrounding agricultural uses.

Prior to 2006, the project site was zoned for agricultural uses but remained vacant. The project site is not designated as “Prime Farmland,” “Unique Farmland,” and “Farmland of Statewide Importance” (CDOC, 2018). The CDOC California Important Farmland 1984-2018, identifies the existing composting facility site as “Semi Agricultural and Rural Commercial Land”. This is defined as lands including farmsteads, agricultural storage and packing sheds, unpaved parking areas, composting facilities, equine facilities, firewood lots, and campgrounds. The balance of the 100-acre project site is identified as “Grazing Land” (CDOC, 2018). Grazing Land is defined as land on which the existing vegetation is suited to the grazing of livestock.

The 100-acre project site has an existing land use designation of 3.4/2.5 (Solid Waste Facilities/Flood Hazard). Due to the project’s location within the SKICSP and present uses, the site is not under Williamson Act Land Use Contract.

The Kern County Agricultural Preserve Program breaks Kern County into 21 different Agricultural Preserves. The project site is within the boundaries of the overall area within Agricultural Preserve Number 12, but the project site is not identified as agriculturally preserved land. According to the DOC, an agricultural preserve defines the boundary of an area within which a city or county has the ability to enter into an agricultural contract with landowners. The agricultural preserve boundary is designated by resolution of the board of supervisors or city council having jurisdiction. Only land located within an agricultural preserve is eligible for a Williamson Act contract.

Preserves are regulated by rules and restrictions designated in the resolution to ensure that the land within the preserve is maintained for agricultural or open space use. These rules are designed to restrict the uses of land enrolled in a Williamson Act contract to agriculture or other compatible uses. Agricultural uses include crop cultivation, grazing operations, commercial wind farms, livestock breeding, dairies, and uses that are incidental to agricultural uses. Other compatible uses include the erection of gas, electric, communications, water, and other similar public utilities. As discussed above, and the project site does not contain land identified as an Agricultural Preserve and the project area is not under an active Williamson Act contract.

4.2.3 Regulatory Setting

Federal

Farmland Protection Policy Act [7 United States Code (USC) Section 4201]

The purpose of the Farmland Protection Policy Act (FPPA) is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It additionally directs federal programs to be compatible with state and local policies for the protection of farmlands. Under the FPPA, the term “farmland” includes Prime Farmland, Unique Farmland, and Farmland of Statewide or Local Importance. Farmland that is subject to FPPA requirements does not have to be currently used as cropland. It can be forestland, pastureland, or other land but not urban and built-up land or water. FPPA assures that, to the extent possible, federal programs are administered to be compatible with State, and local units of government, and private programs and policies to protect farmland.

In 1981, Congress passed the Agriculture and Food Act (Public Law 97-98) which contained the FPPA—Subtitle I of Title XV, Section 1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1994. Federal agencies are required to develop and review their policies and procedures related to implementing the FPPA every two years.

The FPPA does not authorize the federal government to regulate the use of private or nonfederal land or, in any way, affect the property rights of owners. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency (NRCS, 2020).

State

California Department of Conservation , Division of Land Resource Protection

The CDOC applies the Natural Resources Conservation Service (NRCS) soil classifications to identify agricultural lands. These agricultural designations are used in planning for the present and future of California’s agricultural land resources. The CDOC uses a minimum mapping unit of 10 acres; parcels that are smaller than 10 acres are absorbed into the surrounding classifications.

The list below describes the categories mapped by the CDOC (CDOC, 2018) through the FMMP. Collectively, lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are referred to as “farmland.”

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

- **Farmland of Statewide Importance.** Farmland that is similar to Prime Farmland but with minor shortcomings, such as greater slopes or lower moisture content. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Unique Farmland.** Land with lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include land that supports non-irrigated orchards or vineyards, as found in some climatic zones in California. The land must have been used for crops at some time during the four years prior to the mapping date.
- **Farmland of Local Importance.** Land that is important to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land.** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups with an interest in grazing activities.
- **Urban and Built-Up Land.** Land that is developed with structures that have been built to a density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land supports residential, industrial, commercial, institutional, public administrative uses; railroad and other transportation yards; cemeteries; airports; golf courses; sanitary landfills; sewage treatment facilities; water control structures; and other developed uses.
- **Other Land.** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Undeveloped and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

California Land Conservation Act (Williamson Act)

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act (California Government Code Section 51200-51297.4), and is applicable to specific parcels within the State of California. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses in return for reduced property tax assessments. Private land within locally designated agricultural preserve areas is eligible for enrollment under a Williamson Act contract. The Williamson Act program is administered by the CDOC, in conjunction with local governments that administer the individual contract arrangements with landowners. Participation in the Williamson Act program is dependent on County adoption and implementation of the program and is voluntary for landowners (CDOC, 2019).

Under the Williamson Act, a landowner commits the parcel to a 10-year period, during which time no conversion out of agricultural use is permitted. In return, the land is taxed at a rate based on the actual use (i.e., agricultural production), as opposed to its unrestricted market value. Each year the contract automatically renews unless a notice of nonrenewal or cancellation is filed. However, the application to cancel must be consistent with the criteria of the affected County or city. Nonrenewal or contract cancellation does not change a property's zoning. Participation in the Williamson Act program, which is voluntary for landowners, is dependent on a county's willingness to adopt and implement the program. The Williamson Act states that a Board or council will, by resolution, adopt rules governing the administration of agricultural preserves. The rules of each agricultural preserve specify the allowed uses. Generally, any commercial agricultural use would be permitted within any agricultural preserve. In addition, local governments may identify compatible uses permitted under a permit (CDOC, 2019).

California Government Code Section 51238 states that, unless otherwise decided by a local board or council, the erection, construction, alteration, or maintenance of electric and communication facilities, as well as other facilities, are determined to be compatible uses within any agricultural preserve. Also, Section 51238 states that board of supervisors may impose conditions on lands or land uses to be placed within preserves to permit and encourage compatible uses, in conformity with Section 51238.1. Furthermore, under California Government Code Section 51238.1, a board or council may allow any use that without conditions or mitigations would otherwise be considered incompatible. However, this may occur only if that use meets the following conditions:

- The use would not significantly compromise the long-term agricultural capability of the subject contracted parcel or parcels on other contracted lands in agricultural preserves;
- The use would not significantly displace or impair current or reasonably foreseeable agricultural operations on the subject contracted parcel or parcels on other contracted lands in agricultural preserves. Uses that significantly displace agricultural operations may be deemed compatible if they relate directly to the production of commercial agricultural products on the subject contracted parcel or parcels or neighboring lands, including activities such as harvesting, processing, or shipping; and
- The use would not result in the significant removal of adjacent contracted land from agricultural or open-space use.

Farmland Security Zone Act

The Farmland Security Zone Act is similar to the Williamson Act and was passed by the California State Legislature in 1999 to ensure that long-term farmland preservation is part of public policy in the State. Farmland Security Zone Act contracts are sometimes referred to as "Super Williamson Act Contracts." Under the provisions of this act, a landowner already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the County. Farmland Security Zone classification automatically renews each year for an additional 20 years. In return for a further 35 percent reduction in the taxable value of land and growing improvements

(in addition to Williamson Act tax benefits), the owner of the property promises not to develop the property into nonagricultural uses.

Public Resources Code Section 21060.1

Public Resources Code 21060.1 uses the FMMP to define agricultural land for the purposes of assessing environmental impacts. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and analyze the conversion of such lands. The FMMP provides analysis pertaining to agricultural land use changes throughout California.

Local

Kern County General Plan

The Kern County General Plan states that agriculture is vital to the future of Kern County and sets goals to protect important agricultural land for future use and prevent the conversion of prime agricultural land to other uses (e.g., industrial or residential). The Kern County General Plan includes three designations for agricultural land:

- **8.1 Intensive Agriculture (minimum parcel size 20 acres gross)** – lands devoted to the production of irrigated crops or having potential for such use;
- **8.2 Resource Reserve (minimum parcel size is to acres gross, except to a Williamson Act Contract/Farmland Security Zone Contract, in which case the minimum parcel size shall be 80 acres gross)** – land devoted to areas of mixed natural resources characteristics including rangeland, woodland, and wildlife habitat which occur in an established County water district; and
- **8.3 Extensive Agriculture (minimum parcel size 20 acres gross, except land subject to a Williamson Act contract/Farmland Security Zone contract, in which case the minimum parcel size shall be 80 acres gross)** – lands devoted to uses involving large amounts of land with relatively low value-per-acre yields such as livestock grazing, dry-land farming, and woodlands.
- **8.5 Resource Management (minimum parcel size 20 acres gross, except lands subject to a Williamson Act Contract/Farmland Security Zone contract, in which case the minimum parcel size shall be 80 acres gross)** – Lands consisting primarily of open space containing important resource values, such as wildlife habitat, scenic values, or watershed recharge areas. These areas may be characterized by physical constraints or may constitute an important watershed recharge area or wildlife habitat or may have value as a buffer between resource areas and urban areas. Other lands with this resource attribute are undeveloped, non-urban areas that do not warrant additional planning within the foreseeable future because of current population (or anticipated increase), marginal physical development, or no subdivision activity.

The policies, goals, and implementation measures in the Kern County General Plan for agricultural resources applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development such as the proposed project. Therefore, they are not listed below, but as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the Kern County.

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

1.9 Resource

Goals

- **Goal 1.** To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations which will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources, or diminish the other amenities which exist in the County.
- **Goal 2:** Protect areas of important mineral, petroleum, and agricultural resource potential for future use.
- **Goal 5.** Conserve prime agriculture lands from premature conversion.

Policies

- **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.

Southern Kern Industrial Center Specific Plan (SKICSP)

The proposed project is within the South Kern Industrial Center (SKIC). The SKICSP boundary consists of approximately 744 acres, which are entirely designated for Heavy Industrial land uses as stated in the provisions of the SKICSP. The SKICSP is located approximately 18 miles southwest of Bakersfield and approximately 7 miles east of Taft, in unincorporated Kern County. The composting facility was approved by Kern County under Conditional Use Permit No. 2, Map No. 158 (“Existing CUP”) on October 22, 2002 (Resolution No. 2002-421), along with a Supplemental Environmental Impact Report which was certified on the same date (collectively “Existing Entitlements”). Subsequent to the approvals, the Facility underwent construction and began operations in 2006.

The SKICSP was designed to achieve three primary goals; implement the Kern County General Plan, establish development standards, and guide the planned development of the SKIC. The SKICSP contains general goals related to orderly growth and development, coordinated development with the Kern County General Plan. There are no policies related to Agricultural Resources included in SKICSP, however General Goal 2 of the SKICSP requires that growth and development within the SKICSP boundary be in accordance with the Kern County General Plan, including the goals and policies listed above.

Kern County Zoning Ordinance

The Kern County Zoning Ordinance establishes basic regulations under which land is developed. This includes allowable uses, building setback requirements, and development standards. Pursuant to State law, the zoning ordinance must be consistent with the Kern County General Plan. The basic intent of the Kern County Zoning Ordinance is to promote and protect the public health, safety, and welfare via the orderly regulation of the land uses throughout the unincorporated area of the County. The zoning ordinance applies to all property in unincorporated Kern county, except land owned by the United States or any of its agencies.

The project site is zoned within the South Kern Industrial Specific Plan (SP) district. The SP district requires compliance with the development standards of the M-3: Heavy Industrial zoning district of the Kern County General Plan, however, the SP does not allow for as many heavy industrial land uses as the M-3 zoning district to provide better control over and reduce the potential for impacts from development within the SKICSP. Kern County Zoning Ordinance contains different chapters related to composting facilities. Chapter 19.12 (Exclusive Agriculture “A” District) discusses waste facilities and specifically allows agricultural green waste composting, with certain exceptions that would not be applicable to the proposed project. Chapter 19.46 refers to Resource Extraction and Energy Development Uses, Waste Facilities and Institutional Uses. Under waste facilities, green waste composting is included. As further described in **Chapter 3, Project Description**, a modification to the existing CUP would be required in order to allow for the expansion and use of feedstocks.

4.2.4 Impacts and Mitigation Measures

This section of the EIR describes the impact analysis relating to agriculture and forest resources for the project. It describes the methods used to determine the impacts of the project and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Methodology

The proposed project’s potential impacts on agriculture and forest resources have been evaluated on a qualitative basis by reviewing the *Kern County Agricultural Crop Report* (2019) and the 2018 CDOC Important Farmland Map. A change in land use would normally be determined to be significant if the effects described in the thresholds of significance were to occur (see CCR Title 14, Section 15064.7(a)). The evaluation of project impacts is based on a thorough analysis of the Kern County General Plan’s applicable goals and policies related to agricultural resources, professional judgment, and the significance criteria established by CEQA.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact on Agricultural resources

Such an impact would occur if the proposed project would:

- a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural uses;
- 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 Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g));
- d. Result in the loss of forest land or conversion of forest land to non-forest use; and
- 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.
- f. Result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Section 15206(b)(3) Public Resources Code?)

The lead agency determined in the Notice of Preparation/Initial Study (NOP/IS) that the following environmental issue areas would result in no impacts or less-than-significant impacts and, therefore, are scoped out of this EIR. Please refer to Appendix A of this EIR for a copy of the NOP/IS and additional information regarding these issue areas:

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

No lands within or immediately adjacent to the project are zoned forest land or timberland or contain any forested areas. Due to a lack of forest land on the site, the project does not involve any changes to the existing environment that, due to their location or nature, could result in impacts resulting in the loss of forest land or conversion of forest land to non-forest use. No further analysis is warranted.

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

As noted above, no lands within or immediately adjacent to the project are zoned forest land or timberland or contain any forested areas. Due to a lack of forest land on the site, the project does not involve any changes to the existing environment that, due to their location or nature, could result in impacts resulting in the loss of forest land or conversion of forest land to non-forest use. In addition, the proposed modifications do not include expanding the physical footprint of the existing facility operations and thus would not result in additional conversion of land or loss of designated forest land to non-forest uses. No further analysis is warranted.

Project Impacts and Mitigation Measures

Impact 4.2-1: The Project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.

The project site is not located on prime farmland, unique farmland, or farmland of statewide importance. The site is not currently used for agricultural production. The California Department of Conservation's Kern County Important Farmland 2018 Map identifies the existing composting facility site as semi agricultural and rural commercial land. This is defined as lands including farmsteads, agricultural storage and packing sheds, unpaved parking areas, composting facilities, equine facilities, firewood lots, and campgrounds. The balance of the 100-acre project site is identified as "Grazing Land" (CDOC, 2018). Therefore, because the project site is designated as "Grazing Land" and the proposed project would not convert any existing designated farmland to a nonagricultural use, impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Impact 4.2-2: The project would conflict with existing zoning for agricultural use or a Williamson Act Contract.

The 100-acre project site has an existing land use designation of 3.4/2.5 (Solid Waste Facilities/Flood Hazard) within the SKICSP. Due to the project's location within the SKICSP, and the fact the project site is not identified as an agricultural preserve area, the proposed project is not subject to any associated land use limitation. In addition, the project site is not under Williamson Act Land Use Contract. Immediately surrounding the project site are petroleum facilities to the north and solar power generation to the east, west, and south. Further beyond these areas there is active agricultural production in areas under Williamson Act Contracts. These areas, however, would not be affected by the proposed project as the project would occur only within the existing 100-acre area already permitted for use as a composting facility. Therefore, the proposed project

would not conflict with an existing Williamson Act contract and impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Impact 4.2-3: The Project involves 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.

As noted above, the project site and immediate surrounding properties do not contain any forest land or active farming land. Due to a lack of forest land or active farming on the site, the project would not involve any changes to the existing environment that, 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. In addition, the proposed project does not propose conversion of off-site areas and would not affect the continued use of these areas. Impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Impact 4.2-4: The project would result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Section 15206(b)(3) Public Resources Code.

No lands within the project site are subject to a Williamson Act Land Use contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone contract. The project would not result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone contract for any parcel of 100 or more acres (Section 15206[b][3] Public Resources Code). In addition, the proposed project does not propose conversion of off-site areas under a Williamson Act Contract and would not affect the continued use of any area under a Williamson Act Contract and no impacts would occur.

Mitigation Measures

No mitigation would be required.

Level of Significance

No impact.

Cumulative Setting, Impacts and Mitigation Measures

The proposed project would have less than significant impacts with regard to impacts to agricultural resources and would not make a cumulative contribution to the loss of farmland in the local vicinity within the western region of Kern County, or in relation to any other lands within County boundaries. Additionally, the proposed project would not result in a cumulative loss of farmland within the greater central valley region of California. While there are other past, present, and future projects that have and would result in farmland conversion, the proposed project would not make a significant contribution to the overall loss. As described above, the proposed project is not under existing agricultural production, is not designated as important farmland, is not under a Williamson Act Contract, and due to its location and immediately surrounding uses, would not preclude the use of any other area for agriculture. Therefore, the proposed project would not, taken in consideration of past, present and future projects, make a cumulative contribution to the loss of agricultural or forest land. Impacts would be less than significant in this regard.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

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Section 4.3

Air Quality

4.3.1 Introduction

This section of the Environmental Impact Report (EIR) describes the regional and local air quality conditions of the project site and regulatory setting and evaluates the potential air quality impacts associated with construction and operation of the proposed project, including any mitigation measures required to reduce these impacts, if applicable. The analysis includes evaluation of criteria air pollutants and their precursors, toxic air contaminants, and odors. Greenhouse gases are addressed in **Section 4.7, *Greenhouse Gas Emissions***, of this EIR.

This analysis is being prepared in accordance with the requirements and guidelines of the California Environmental Quality Act (CEQA). The analysis is largely based on information provided in the *Synagro South Kern Compost Manufacturing Facility Project (Air Quality and GHG Technical Report)* (Insight Environmental/Trinity Consultants 2020), prepared by Insight Environmental, a Trinity Consultants Company, for the project (Appendix B). The report was prepared in accordance with the San Joaquin Valley Air Pollution Control District's (SJVAPCD) *Guidelines for Assessing and Mitigating Air Quality Impacts*, and the Kern County Planning Department's *Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports*.

4.3.2 Environmental Setting

The California Air Resources Board (CARB) has divided California into regional air basins according to topographic drainage features. The proposed project site is located in the western portion of Kern County, within the San Joaquin Valley Air Basin (SJVAB) and is under the jurisdiction of the SJVAPCD. The SJVAB, which is 250 miles long and 35 miles wide, is the second-largest air basin in the state.

The San Joaquin Valley floor is within the southern end of the SJVAB, which is made up of all or portions of eight counties in California's Central Valley. These counties are Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare Counties, as well as the San Joaquin Valley portion of Kern County. The western portion of Kern County, where the project site is located, is regulated by the SJVAPCD.

Air pollution in the SJVAB can be attributed to both human-related (anthropogenic) and natural (non-anthropogenic) activities that produce emissions. Air pollution from significant anthropogenic activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. Activities that tend to increase mobile activity include increases in population, increases in traffic (including automobiles, trucks, aircraft, and rail), urban sprawl (which increases commuter driving distances), and general local land management practices as they pertain to modes of commuter transportation. Air pollution is also transported into the SJVAB from a variety of sources, including northern California and Asia.

Topography and Meteorology

Air pollution, especially the dispersion of air pollutants, is directly related to the region's topographic features, which also make up the SJVAB boundaries. The SJVAB lies in the central region of the State of California and is bounded to the east by the Sierra Nevada Mountain Range (8,000 to 14,000 feet in elevation), to the west by the Coast Mountain Range (3,500 to 6,000 feet in elevation), and to the south by the Tehachapi Mountain Range (6,000 to 8,000 feet in elevation) and the San Emigdio Mountain Range (6,000-7,500 feet in elevation). Between these boundaries is a relatively flat valley floor that opens to the sea at the Carquinez Strait where the San Joaquin-Sacramento Delta (Delta) empties into San Francisco Bay.

Localized air quality can be greatly affected by elevation and topography. For the majority of the San Joaquin Valley, air movement through and out of the SJVAB is restricted by the hills and the mountains surrounding it. Although marine air generally flows into the SJVAB from the San Joaquin-Sacramento Delta, the Coast Range hinders wind movement into the SJVAB from the west, the Tehachapi Mountains prevent the southerly passage of airflow, and the Sierra Nevada is a significant wind barrier to the east. These topographic features result in weak airflow into the valley, which becomes vertically blocked by high barometric pressure over the SJVAB. As a result, the majority of the SJVAB is highly susceptible to pollutant accumulation over time. Furthermore, most of the surrounding mountains are above the normal height of the summer inversion layer.

Wind Patterns

Wind speed and direction play an important role in the dispersion and transport of air pollutants. Ozone (O₃) and inhalable particulates (particulate matter 10 microns or less in diameter [PM₁₀] and particulate matter 2.5 microns or less in diameter [PM_{2.5}]) are classified as regional pollutants because they can be transported away from the emission source before concentrations peak. In contrast, local pollutants, such as carbon monoxide (CO), tend to have their highest concentrations near the source of emissions and dissipate easily; therefore, their highest concentrations occur during low wind speeds.

Wind speed and direction data indicate that during the summer, winds usually originate at the north end of the SJVAB and flow in a south/southeasterly direction through the Tehachapi Pass and into the Southeast Desert Air Basin. During the winter, winds occasionally originate from the south end of the SJVAB and flow in a north/northwesterly direction. Also, during winter, the SJVAB experiences light, variable winds, typically less than 10 miles per hour. Low wind speeds, combined with low inversion layers in the winter, create a climate that is conducive to high CO and inhalable PM₁₀ concentrations.

The vertical mixing of air pollutants is limited by the presence of persistent temperature inversions. Inversions may be either at ground level or elevated. Ground-level inversions occur frequently during fall and early winter (i.e., October through January). High concentrations of primary pollutants, which are those emitted directly into the atmosphere (e.g., CO), may be found during these times. Elevated inversions act as a lid over the basin and limit vertical mixing. Severe air

stagnation occurs as a result of these inversions. Elevated inversions contribute to the occurrence of high levels of O₃ during the summer months.

Climate

The SJVAB enjoys an inland Mediterranean climate, averaging more than 260 sunny days per year. The valley floor is characterized by warm, dry summers and cooler winters. Average daily temperatures in the basin range from 41.7 degrees Fahrenheit (°F) in December to 98.7°F in July. Summer highs often exceed 100°F, averaging in the low 90s in the northern valley and high 90s to the south. Although the SJVAB enjoys a high percentage of sunshine, a reduction in sunshine occurs during December and January because of fog and intermittent stormy weather. Nearly 90 percent of the annual precipitation falls in the six months between October and May. Precipitation is low because the mountains to the west and south produce a rain shadow effect by intercepting prefrontal, moisture-laden western and southern winds. The southern valley receives precipitation primarily from cold, unstable, northwesterly flows that usually follow a frontal passage.

Precipitation

Precipitation in the SJVAB is strongly influenced by the position of the semi-permanent subtropical high-pressure area located off the Pacific Coast (the Pacific High). In the winter, this high-pressure system moves southward, allowing Pacific storms to move through the SJVAB. Most of the precipitation in the valley is winter rain produced by these storms. Snowstorms, hailstorms, and ice storms occur infrequently in the valley, and severe occurrences are very rare.

Precipitation on the SJVAB floor and in the Sierra Nevada decreases from north to south. This decrease is primarily because the Pacific storm track often passes through the northern part of the State, while the southern part of the State remains protected by the Pacific High. For example, the northern portion of the SJVAB (Manteca and Stockton areas) receives approximately 20 inches of rain per year, the central portion (Fresno area) receives approximately 10 inches of rain per year, and the southern portion (Bakersfield area) receives less than 6 inches of rain per year. The Tejon Pass area receives about 12 inches of rain per year.

Sensitive Receptors

Some people are considered more sensitive to air pollutants than others, including those with pre-existing health problems, those who are close to an emissions source, or those who are exposed to air pollutants for long periods of time. The SJVAPCD Guide for Assessing and Mitigation Air Quality Impacts (GAMAQI) defines sensitive receptors as those that are more susceptible to the effects of air pollution than the population at large and include “facilities that house or attract children, the elderly, and people with illnesses, hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors”. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be relatively sensitive because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. Residential areas are considered sensitive to poor air quality because people in residential areas are often at home for extended periods.

Recreational land uses are moderately sensitive to air pollution because vigorous exercise associated with recreation places a high demand on the human respiratory function.

The nearest sensitive receptor for this project are residential uses approximately 1.5 miles to the north of the project site. There also is a mobile home residence permitted for use by the caretaker/operator of a catfish farm approximately 1.5 miles northeast of the project site. The nearest community, San Emidio, is approximately 8 miles to the northwest of the existing Facility. There are no known non-residential sensitive receptors within 2 miles of the project site.

Ambient Air Quality Standards

National and State Ambient Air Quality Standards

Both the State of California and the federal government have established ambient air quality standards for several different pollutants. A summary of state and national ambient air quality standards (CAAQS and NAAQS, respectively) is shown in **Table 4.3-1, National and California Ambient Air Quality Standards**. For some pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For other pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions).

As required by the Federal Clean Air Act (CAA), the U.S. Environmental Protection Agency (USEPA) has identified criteria pollutants and has established National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. The NAAQS have been established for ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (less than 10 microns in diameter [PM₁₀] and less than 2.5 microns in diameter [PM_{2.5}]), and lead (Pb). These pollutants are called “criteria” air pollutants because standards have been established for each of them to meet specific public health and welfare criteria.

To protect human health and the environment, the USEPA has set “primary” and “secondary” ambient standards for each of the criteria pollutants. Primary thresholds were set to protect human health, particularly sensitive receptors such as children, the elderly, and individuals suffering from chronic lung conditions such as asthma and emphysema. Secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings.

Table 4.3-1: National and California Ambient Air Quality Standards

Pollutant	Averaging Time	National Standards ^a	California Standards ^b
Ozone (O ₃)	8 Hours	0.070 ppm (137 µg/m ³) ^c	0.070 ppm (137 µg/m ³)
	1 Hour	-- ^d	0.09 ppm (180 µg/m ³)
Carbon Monoxide (CO)	8 Hours	9 ppm (10 mg/m ³)	9.0 ppm (10 mg/m ³)
	1 Hour	35 ppm (40 mg/m ³)	20 ppm (23 mg/m ³)
Nitrogen Dioxide (NO ₂)	Annual Average	53 ppm (100 µg/m ³)	0.030 ppm (56 µg/m ³)
	1 Hour	100 ppb (188.68 µg/m ³)	0.18 ppm (338 µg/m ³)
Sulfur Dioxide (SO ₂)	3 Hour	0.5 ppm (1,300 µg/m ³)	--
	24 Hours	0.14 ppm (365 µg/m ³)	0.04 ppm (105 µg/m ³)
	1 Hour	75 ppb (196 µg/m ³)	0.25 ppm (655 µg/m ³)
Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	-- ^e	20 µg/m ³
	24 Hours	150 µg/m ³	50 µg/m ³
Particulate Matter—Fine (PM _{2.5})	Annual Arithmetic Mean	12.0 µg/m ³	12 µg/m ³
	24 Hours	35 µg/m ³	--
Sulfates (SO ₄)	24 Hours	--	25 µg/m ³
Lead ^f (Pb)	Rolling Three Month Average	0.15 µg/m ³	--
	30-day Average	--	1.5 µg/m ³
Hydrogen Sulfide (H ₂ S)	1 Hour	--	0.03 ppm (42 µg/m ³)
Vinyl Chloride (chloroethene)	24 Hours	--	0.01 ppm (26 µg/m ³)
Visibility-Reducing Particles (VRPs)	8 Hours (1000 to 1800 PST)	--	-- ^g

ppm = parts per million; ppb = parts per billion; mg/m³ = milligrams per cubic meter; µg/m³ = micrograms per cubic meter.

^a 1-Hour O₃ standard revoked effective June 15, 2005.

^b Annual PM 10 standard revoked effective December 18, 2006.

^c USEPA finalized the revised (2008) 8-hour O₃ standard of 0.075 ppm on March 27, 2008. The 1997 8-hour O₃ standard of 0.08 ppm has not been revoked. In the January 19, 2010 Federal Register, USEPA proposed to revise the 2008 O₃ NAAQS of 0.075 ppm to a NAAQS in the range of 0.060 to 0.070 ppm. USEPA expects to finalize the revised NAAQS, which will replace the 0.075 ppm NAAQS, by July 29, 2011.

^d On October 15, 2008, USEPA strengthened the Pb standard.

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

Source: Insight Environmental Consultants, 2020.

Local Standards

CARB operates the local meteorological and air quality monitoring stations in the project vicinity.

Table 4.3-2, San Joaquin Valley Air Basin Attainment Status, lists the air quality attainment status for the SJVAB. Pursuant to the methodologies prescribed by the SJVAPCD's GAMAQI, the analysis within this section primarily models and analyzes reactive organic gases (ROG), nitrogen

oxides (NO_x), carbon monoxide (CO), particulate matter 10 microns or less in diameter (PM₁₀), particulate matter 2.5 microns or less in diameter (PM_{2.5}) and sulfur oxides (SO_x). In accordance with the January 2015 GAMAQI technical guidance document, the SJVAPCD no longer monitors lead in the ambient air of the SJVAB since the use of leaded fuel has been mostly phased out. Hydrogen sulfide (H₂S) is associated with geothermal activities, oil and gas production, refining, sewage treatment plants and confined animal feeding operations; however, CARB does not have a measuring method to accurately designate areas in the state (i.e., attainment or nonattainment). Sulfate data collected in the SJVAB demonstrated levels of sulfates significantly less than the health standards.

Areas can be classified as in attainment (air pollutant levels consistently below the standard) or as nonattainment (levels of air pollutant consistently violate the standard). Areas that do not meet the standards shown in **Table 4.3-1, National and California Ambient Air Quality Standards** are classified as nonattainment areas. The determination of whether an area meets the State and National standards is based on air quality monitoring data. Some areas are unclassified, which means that not enough data is available to determine whether the standard is exceeded in an area. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant specific, an area may be classified as a nonattainment area for one pollutant and an attainment area for another. Similarly, because the State and National standards differ, an area could be classified as an attainment area for the National standards of a pollutant and as a nonattainment area for the state standards of the same pollutant. As presented in **Table 4.3-2, San Joaquin Valley Air Basin Attainment Status**, the SJVAB is currently in severe nonattainment for the one-hour State standard for ozone (O₃), extreme nonattainment and nonattainment for the eight-hour federal and State standard for O₃, respectively, and nonattainment for State standard for PM₁₀. The area is also in nonattainment for the federal and State standards for particulate matter 2.5 microns or less in diameter (PM_{2.5}).

In order to reach attainment for the State and National ambient air quality standards, the Extreme Ozone Attainment Demonstration Plan (Extreme OADP) was published by the SJVAPCD and approved by CARB and the United States Environmental Protection Agency (USEPA). The Extreme OADP was prepared to fulfill the requirements of the Federal Clean Air Act (CAA) and attain the federal one-hour O₃ ambient air quality standards in the SJVAB by November 15, 2010. It identifies control measures needed to reduce emissions and projects future air quality impacts with implementation of those controls. The SJVAPCD and CARB implement control measures needed to achieve emission reductions, with the SJVAPCD implementing some of the control measures as listed in the Extreme OADP as rules.

Table 4.3-2: San Joaquin Valley Air Quality Attainment Status

Pollutant	Federal Standards ¹	State Standards ²
Ozone—1 hour	No federal standard ³	Nonattainment - Severe
Ozone—8 hour	Nonattainment – Extreme ⁴	Nonattainment
PM ₁₀	Attainment ⁵	Nonattainment
PM _{2.5}	Nonattainment ⁶	Nonattainment
CO	Attainment /Unclassified	Attainment/Unclassified
Nitrogen dioxide	Attainment/Unclassified	Attainment
Sulfur dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No designation/classification	Attainment
Hydrogen sulfide	No federal standards	Unclassified
Sulfates	No federal standards	Attainment
Visibility-reducing particulates	No federal standards	Unclassified
Vinyl Chloride	No federal standard	Attainment

^a See 40 CFR Part 81

^b See CCR Title 17 Sections 60200-60210

^c On September 25, 2008, USEPA redesignated the San Joaquin Valley to attainment for the PM₁₀ National Ambient Air Quality Standard (NAAQS) and approved the PM₁₀ Maintenance Plan.

^d The Valley is designated nonattainment for the 1997 PM_{2.5} NAAQS. USEPA designated the Valley as nonattainment for the 2006 PM_{2.5} NAAQS on November 13, 2009 (effective December 14, 2009).

^e Though the Valley was initially classified as serious nonattainment for the 1997 8-hour O₃ standard, USEPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

^f Effective June 15, 2005, the USEPA revoked the federal 1-hour O₃ standard, including associated designations and classifications. USEPA had previously classified the SJVAB as extreme nonattainment for this standard. USEPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour O₃ nonattainment areas continue to apply to the SJVAB.

Source: Insight Environmental Consultants, 2020.

Regional Air Quality

The SJVAPCD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the SJVAB. The SJVAPCD jurisdiction includes all of Merced, San Joaquin, Stanislaus, Madera, Fresno, Kings, and Tulare counties, and the San Joaquin Valley portion of Kern County. The SJVAPCD has identified quantitative emission thresholds for CO, nitrogen oxides (NO_x), ROGs, SO_x, PM₁₀, and PM_{2.5} to determine whether the potential air quality impacts of a project may produce a significant impact. The air quality threshold for CO is 100 tons per year, NO_x and ROG is 10 tons per year, SO_x is 27 tons per year, and for PM₁₀ and PM_{2.5} is 15 tons per year, which establish the limit at which an impact to the SJVAB may occur.

Additionally, the SJVAPCD's GAMAQI considers construction emissions and operational emissions as separate and distinct in that construction emissions are considered short-term impacts and temporary in nature while operational and area source emissions are considered long-term.

The SJVAPCD has set up the Indirect Source Review (ISR) Program in order to address new development projects that have not yet gained discretionary approval from the applicable public agency. The ISR Program is based on SJVAPCD Rules 9510 and 3180, which provide a methodology for assessing the air quality impacts created by a new development; regulations to limit the emissions of pollutants during the construction process; and the option of onsite emissions

reduction measures and offsite emission reduction through fees, which are used to fund offsite emission reduction projects, or some combination of both options.

Ambient Air Monitoring

CARB has established and maintains a network of sampling stations (called the State and Local Air Monitoring Stations [SLAMS] network) that work in conjunction with local air pollution control districts (APCDs) and air quality management districts to monitor ambient pollutant levels. The SLAMS network in Kern County consists of eight stations that monitor various pollutant concentrations. The locations of these stations were chosen to meet monitoring objectives, which, for the SLAMS network, call for stations that monitor the highest pollutant concentrations, representative concentrations in areas of high population density, the impact of major pollution emissions sources, and general background concentration levels. The SVJAPCD is responsible for monitoring air quality in the Kern County portion of the SVJAB to determine whether pollutant concentrations meet state and national air quality standards.

Local Air Quality

For the purposes of background data for the project's air quality assessment, analysis relied on data collected in the last three years for the CARB monitoring stations located in the closest proximity to the project site. The monitoring locations are designated to monitor different types of pollutants, as described below. **Table 4.3-3, Existing Air Quality Monitoring Data in Project Area**, provides the background concentrations for O₃, particulate matter of 10 microns (PM₁₀), particulate matter of less than 2.5 microns (PM_{2.5}), CO, NO₂, SO₂, and Pb as of June 2015. No data is available for H₂S, Vinyl Chloride, or other toxic air contaminants in the Kern County or surrounding counties. Information for 2015 through 2017 is provided for the following CARB air monitoring locations:

- Maricopa Stanislaus Street CARB monitoring station: Stanislaus Street, Bakersfield, approximately 10 miles southwest of the project site. This location is designated as a gaseous and meteorological monitoring location and is operated by the District.
- Bakersfield California Avenue CARB monitoring station, located at 5558 California Avenue, Bakersfield, approximately 18 miles northeast of the project site. This location is designated as a gaseous, meteorological, particulate, fine particulate, and toxins monitoring location and is operated by CARB.
- Bakersfield Golden State Highway CARB monitoring station, located at Golden State Highway, Bakersfield, approximately 18 miles northeast of the project site. This location is designated as a particulate and fine particulate monitoring location and is operated by SJVAPCD.
- Bakersfield Municipal Airport CARB monitoring station, located at 2000 S Union Ave, Bakersfield, approximately 19 miles northeast of the project site. This location is designated as a fine particulate monitoring location and is operated by CARB.

Table 4.3-3: Existing Air Quality Monitoring Data in Project Area

Pollutant and Monitoring Station Location	Maximum Concentration (ppm)			Days Exceeding Standard		
	2016	2017	2018	2016	2017	2018
O₃ – 1-hour CAAQS (0.09 ppm)						
Bakersfield – 5558 California Ave.	0.092	0.122	0.107	0	11	8
Maricopa – Stanislaus Street	0.092	0.117	0.098	0	1	5
O₃ – 8-hour CAAQS (0.07 ppm)						
Bakersfield – 5558 California Ave.	0.086	0.104	0.098	63	87	64
Maricopa – Stanislaus Street.	0.087	0.094	0.093	55	42	46
O₃ – 8-hour NAAQS (0.07 ppm)						
Bakersfield – 5558 California Ave.	0.085	0.104	0.098	60	85	60
Maricopa – Stanislaus Street	0.087	0.093	0.089	98	96	95
PM₁₀ – 24-hour CAAQS (50 µg/m³)						
Bakersfield-5558 California Ave.	92.2	143.6	142.0	21	16	13
Bakersfield – Golden State Highway	91.6	165.1	159.0	26	24	27
PM₁₀ – 24-hour NAAQS (150 µg/m³)						
Bakersfield-5558 California Ave.	90.9	138.0	136.1	0	0	0
Bakersfield – Golden State Highway	91.6	158.2	155.2	0	1	1
PM_{2.5} - 24-hour NAAQS (35 µg/m³)						
Bakersfield – 5558 California Ave.	66.4	101.8	98.5	23	28	36
Bakersfield – Golden State Highway	53.9	74.3	99.1	7	9	11
CO - 8-Hour CAAQS & NAAQS (9.0 ppm)						
No data collected	*	*	*	*	*	*
NO₂ - 1-Hour CAAQS (0.18 ppm)						
Bakersfield – 5558 California Ave.	0.058	0.066	0.061	0	0	0
Bakersfield – Municipal Airport	0.058	0.062	0.057	0	0	0
NO₂ - 1-Hour NAAQS (0.10 ppm)						
Bakersfield – 5558 California Ave.	0.058	0.066	0.062	0	0	0
Bakersfield – Municipal Airport	0.058	0.063	0.057	0	0	0
SO₂ – 24-hour Concentration - CAAQS (0.04 ppm) & NAAQS (0.14 ppm)						
No data collected	*	*	*	*	*	*
Pb - Maximum 30-Day Concentration CAAQS (1500 ng/m³)						
Bakersfield - 5558 California Ave.	19.8	12.6	9.3	*	*	*

Source: CARB 2020
Notes: ppm= parts per million
* There was insufficient (or no) data available to determine the value.
Source: Insight Environmental Consultants, 2020.

Criteria Air Pollutants

The following is a general description of the sources, and the physical and health effects, for air pollutants expected from this proposed project.

Ozone (O₃)

Ozone occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. Here, at ground level, tropospheric, or "bad," ozone is an air pollutant that damages human health, vegetation, and many common materials. It is a key ingredient of urban smog. The troposphere extends to a level about 10 miles up where it meets the second layer, the stratosphere. The stratospheric or "good" ozone layer extends upward from about 10–30 miles and protects life on earth from the sun's harmful ultraviolet rays.

"Bad" ozone is what is known as a photochemical pollutant. It needs reactive organic gases (ROGs), nitrogen oxides (NO_x), and sunlight to form. ROG and NO_x are emitted from various sources throughout Kern County. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. To reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors.

Ozone is a regional air pollutant. It is generated over a large area and transported and spread by the wind. As the primary constituent of smog, ozone is the most complex, difficult to control, and pervasive of the criteria pollutants. Unlike other pollutants, it is not emitted directly into the air by specific sources but is created by sunlight acting on other air pollutants (the precursors), specifically NO_x and ROG. Sources of precursor gases number in the thousands and include common sources such as consumer products, gasoline vapors, chemical solvents, and combustion byproducts of various fuels. Originating from gas stations, motor vehicles, large industrial facilities, and small businesses such as bakeries and dry cleaners, the ozone-forming chemical reactions often take place in another location, catalyzed by sunlight and heat. Thus, high ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

Health Effects

While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular diseases, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems, such as forests and foothill communities; agricultural crops; and some man-made materials, such as rubber, paint, and plastic. High levels of ozone may negatively affect immune systems, making people more susceptible to respiratory illnesses, including bronchitis and pneumonia. Ozone also accelerates aging and exacerbates pre-existing asthma and bronchitis. Evidence has linked the onset of asthma to exposure to elevated ozone levels in exercising children (CARB 2020). Active people, both children and adults, appear to be more at risk from ozone exposure than those with a low level of activity. In addition, the elderly and those with respiratory disease are also considered sensitive populations for ozone.

Ozone is a powerful oxidant—it can be compared to household bleach, which can kill living cells (such as germs or human skin cells) upon contact. Ozone can damage the respiratory tract, causing inflammation and irritation, and it can induce symptoms such as coughing, chest tightness, shortness of breath, and worsening of asthmatic symptoms. Ozone in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms.

Exposure to levels of ozone above the current ambient air quality standard leads to lung inflammation, lung tissue damage, and a reduction in the amount of air inhaled into the lungs. Health effects include potential increased susceptibility to respiratory infections and reduced ability to exercise. Health effects are more severe in people with asthma and other respiratory ailments. People who work or play outdoors are at a greater risk for harmful health effects from ozone. Children and adolescents are also at greater risk because they are more likely than adults to spend time engaged in vigorous activities. Research indicates that children under 12 years of age spend nearly twice as much time outdoors daily than adults. Teenagers spend at least twice as much time as adults in active sports and outdoor activities. Also, children inhale more air per pound of body weight than adults, and they breathe more rapidly than adults. Children are less likely than adults to notice their own symptoms and avoid harmful exposures. Elevated ozone concentrations also reduce crop and timber yields, damage native plants, and damage materials such as rubber, paints, fabric, and plastics (CARB and American Lung Association of California 2007).

Reactive Organic Gases (ROGs) and Volatile Organic Compounds (VOCs)

Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases, including ROGs and volatile organic compounds (VOCs), which include all hydrocarbons except those exempted by CARB. Therefore, ROGs are a set of organic gases based on State rules and regulations. VOCs are similar to ROGs in that they include all organic gases except those exempted by Federal law. The list of compounds exempt from the definition of a VOC is presented in District Rule 102.

Both VOCs and ROGs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. Combustion engine exhaust, oil refineries, and oil-fueled power plants are the primary sources of hydrocarbons. Another source of hydrocarbons is evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

Health Effects

The primary health effects of hydrocarbons result from the formation of ozone and its related health effects (see the ozone health effects discussion above). High levels of hydrocarbons in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. There are no separate Federal or California ambient air quality standards for ROG. Carcinogenic forms of ROG are considered toxic air contaminants (TACs). An example is benzene, which is a carcinogen. The health effects of individual ROGs are described under the “Toxic Air Contaminants” heading below.

Carbon Monoxide (CO)

CO is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. CO is an odorless, colorless, poisonous gas that is highly reactive. CO is a byproduct of motor vehicle exhaust, which contributes more than 66% of all CO emissions nationwide. In cities, automobile exhaust can cause as much as 95% of all CO emissions. These emissions can result in high concentrations of CO, particularly in local areas with heavy traffic congestion. Other sources of CO emissions include industrial processes and fuel combustion

in sources such as boilers and incinerators. Despite an overall downward trend in concentrations and emissions of CO, some metropolitan areas still experience high levels of CO. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground-level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

Health Effects

When inhaled, CO enters the bloodstream and binds more readily to hemoglobin, the oxygen-carrying protein in blood, than oxygen, thereby reducing the oxygen-carrying capacity of blood and reducing oxygen delivery to organs and tissues. The health threat from CO is most serious for those who suffer from cardiovascular disease. Healthy individuals are also affected but only at higher levels of exposure. Exposure to CO can cause chest pain in heart patients, headaches, and reduced mental alertness. At high concentrations, CO can cause heart difficulties in people with chronic diseases and can impair mental abilities. Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, difficulty performing complex tasks, and, with prolonged enclosed exposure, death.

The adverse health effects associated with exposure to ambient and indoor concentrations of CO are related to the concentration of carboxyhemoglobin in the blood. Health effects observed may include an early onset of cardiovascular disease; behavioral impairment; decreased exercise performance of young, healthy men; reduced birth weight; sudden infant death syndrome; and increased daily mortality rate (Fierro et al. 2001).

Most of the studies that evaluate the adverse health effects of CO on the central nervous system examine high-level poisoning. Such poisoning results in common flu and cold symptoms (shortness of breath on mild exertion, mild headaches, and nausea) to unconsciousness and death. At extremely high concentrations, CO is poisonous and can cause death (USEPA 2016).

Nitrogen Oxides (NO_x)

NO_x is a family of highly reactive gases that is a primary precursor to the formation of ground-level ozone and reacts in the atmosphere to form acid rain. NO_x is emitted from solvents and combustion processes in which fuel is burned at high temperatures, principally motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. A brownish gas, NO_x is a strong oxidizing agent that reacts in the air to form corrosive nitric acid as well as toxic organic nitrates. NO_x is also an ozone precursor that combines with ROG to form ozone (see discussion above for the health effects of ozone).

Health Effects

NO_x is an ozone precursor that combines with ROG to form ozone. See the ozone section above for a discussion of the health effects of ozone. Direct inhalation of NO_x can also cause a wide range of health effects. NO_x can irritate the lungs, cause lung damage, and lower resistance to respiratory infections such as influenza. Short-term exposures (e.g., less than 3 hours) to low levels of nitrogen

dioxide (NO₂) may lead to changes in airway responsiveness and lung function in individuals with preexisting respiratory illnesses. These exposures may also increase respiratory illnesses in children. Long-term exposures to NO₂ may lead to increased susceptibility to respiratory infection and may cause irreversible lung damage. Other health effects are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NO_x can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to the production of particulate nitrates. Airborne NO_x can also impair visibility.

NO_x contributes to a wide range of environmental effects both directly and indirectly when combined with other precursors in acid rain and ozone. Increased nitrogen inputs to terrestrial and wetland systems can lead to changes in plant species composition and diversity. Similarly, direct nitrogen inputs to aquatic ecosystems such as those found in estuarine and coastal waters can lead to eutrophication (a condition that promotes excessive algae growth, which can lead to a severe depletion of dissolved oxygen and increased levels of toxins harmful to aquatic life). Nitrogen, alone or in acid rain, also can acidify soils and surface waters. Acidification of soils causes the loss of essential plant nutrients and increased levels of soluble aluminum, which is toxic to plants. Acidification of surface waters creates conditions of low pH and levels of aluminum that are toxic to fish and other aquatic organisms. NO_x also contributes to visibility impairment (California Air Pollution Control Officers Association [CAPCOA] 2016).

Sulfur Dioxide (SO₂)

Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (SO₂) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California because of regional meteorological features.

SO₂ is a colorless, irritating gas with a “rotten egg” smell that is formed primarily by the combustion of sulfur-containing fossil fuels. Historically, SO₂ was a pollutant of concern in Kern County, but with the successful implementation of regulations, the levels have been reduced significantly.

Health Effects

High concentrations of SO₂ can result in temporary breathing impairment for asthmatic children and adults who are active outdoors. Short-term exposures of individuals to elevated SO₂ levels during moderate activity may result in breathing difficulties that can be accompanied by symptoms such as wheezing, chest tightness, or shortness of breath. Other effects that have been associated with longer-term exposures to high concentrations of SO₂, in conjunction with high levels of particulate matter, include aggravation of existing cardiovascular disease, respiratory illness, and alterations in the lungs’ defenses. SO₂ also is a major precursor to PM_{2.5}, which is a significant health concern and a main contributor to poor visibility (see also the discussion of health effects of particulate matter).

SO₂ not only has a bad odor, it can irritate the respiratory system. Exposure to high concentrations for short periods of time can constrict the bronchi and increase mucous flow, making breathing difficult. SO₂ can also irritate the lung and throat at concentrations greater than 6 parts per million (ppm) in many people, impair the respiratory system's defenses against foreign particles and bacteria when exposed to concentrations less than 6 ppm for longer time periods, and enhance the harmful effects of ozone (combinations of the two gases at concentrations occasionally found in the ambient air appear to increase airway resistance to breathing).

SO₂ tends to have more toxic effects when acidic pollutants, liquid or solid aerosols, and particulates are also present. Effects are more pronounced among "mouth breathers," e.g., people who are exercising or who have head colds. These effects include:

- Health problems, such as episodes of bronchitis requiring hospitalization associated with lower-level acid concentrations;
- Self-reported respiratory conditions, such as chronic cough and difficult breathing, associated with acid aerosol concentrations (individuals with asthma are especially susceptible to these effects. The elderly and those with chronic respiratory conditions may also be affected at lower concentrations than the general population);
- Increased respiratory tract infections associated with longer-term, lower-level exposures to SO₂ and acid aerosols; and
- Subjective symptoms, such as headaches and nausea, in the absence of pathological abnormalities due to long-term exposure.

SO₂ can also easily injure many plant species and varieties, both native and cultivated. Some of the most sensitive plants include various commercially valuable pines, legumes, red and black oaks, white ash, alfalfa, and blackberry. The effects include:

- Visible injury to the most sensitive plants at exposures as low as 0.12 ppm for 8 hours;
- Visible injury to many other plant types of intermediate sensitivity at exposures of 0.30 ppm for 8 hours; and
- Positive benefits from low levels in a very few species growing on sulfur-deficient soils.

In addition, increases in SO₂ concentrations accelerate the corrosion of metals, probably through the formation of acids. SO₂ is a major precursor to acidic deposition. Sulfur oxides may also damage stone and masonry, paint, various fibers, paper, leather, and electrical components.

Increased SO₂ also contributes to impaired visibility. Particulate sulfate, much of which is derived from SO₂ emissions, is a major component of the complex total suspended particulate mixture.

Particulate Matter (PM₁₀ and PM_{2.5})

Particulate matter pollution consists of very small liquid and solid particles floating in the air. Some particles are large and dark enough to be seen as soot or smoke. Others are so small they can be detected only with an electron microscope. Particulate matter is a mixture of materials that can include smoke, soot, dust, salt, acids, and metals. Particulate matter also forms when gases emitted from motor vehicles and industrial sources undergo chemical reactions in the atmosphere. PM₁₀ refers to particles less than or equal to 10 microns in aerodynamic diameter. PM_{2.5} refers to particles less than or equal to 2.5 microns in aerodynamic diameter and is a subset of PM₁₀. Particulate matter

or airborne dusts are the small particles that remain suspended in the air for long periods of time. Particulates of concern are PM₁₀ and PM_{2.5}, which are small enough to be inhaled, pass through the respiratory system, and lodge in the lungs, possibly leading to adverse health effects.

The composition of PM₁₀ and PM_{2.5} can vary greatly with time, location, the sources of the material, and meteorological conditions. Dust, sand, salt spray, metallic and mineral particles, pollen, smoke, mist, and acid fumes are the main components of PM₁₀ and PM_{2.5}. In addition to those listed previously, secondary particles can also be formed as precipitates from photochemical reactions of gaseous SO₂ and NO_x in the atmosphere to create sulfates (SO₄) and nitrates (NO₃), respectively. Secondary particles are of greatest concern during the winter months when low inversion layers tend to trap the precursors of secondary particulates.

In the western United States, there are sources of PM₁₀ in both urban and rural areas. PM₁₀ and PM_{2.5} are emitted from stationary and mobile sources, including diesel trucks and other motor vehicles; power plants; industrial processes; wood-burning stoves and fireplaces; wildfires; dust from roads, construction, landfills, and agriculture; and fugitive windblown dust. Because particles originate from a variety of sources, their chemical and physical compositions vary widely.

Health Effects

The size of particles is directly linked to their potential for causing health problems. PM₁₀ and PM_{2.5} particles are small enough—about one-seventh the thickness of a human hair or smaller—to be inhaled and lodged in the deepest parts of the lung where they evade the respiratory system's natural defenses. Health problems begin as the body reacts to these foreign particles. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. PM₁₀ and PM_{2.5} can aggravate respiratory disease and cause lung damage, cancer, and premature death. Sensitive populations, including children, the elderly, exercising adults, and those suffering from chronic lung disease such as asthma or bronchitis, are especially vulnerable to the effect of PM₁₀. Of greatest concern are recent studies that link PM₁₀ exposure to the premature death of people who already have heart and lung disease, especially the elderly. Acidic PM₁₀ can also damage manmade materials and is a major cause of reduced visibility in many parts of the United States. Non-health-related effects include reduced visibility and soiling of buildings.

Premature deaths linked to particulate matter are now at levels comparable to deaths from traffic accidents and secondhand smoke. One of the most dangerous pollutants, fine particulate matter (e.g., from diesel exhaust) not only bypasses the body's defense mechanisms and becomes embedded in the deepest recesses of the lung but also can disrupt cellular processes. Population-based studies in hundreds of cities in the United States and around the world have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks. Long-term studies of children's health conducted in California have demonstrated that particulate pollution may significantly reduce lung function growth in children (CARB and American Lung Association of California 2007).

A study conducted in 2006 provides evidence that exposure to particulate air pollution is associated with lung cancer. This study found that residents who live in an area that is severely affected by particulate air pollution are at risk of developing lung cancer at a rate comparable to nonsmokers exposed to secondhand smoke. This study also found approximately 16% excess risk of dying from lung cancer due to fine particulate air pollution (Dockery et al. 2006). Another study shows that individuals with existing cardiac disease can be in a potentially life-threatening situation when exposed to high levels of fine air pollution. Fine particles can penetrate the lungs and cause the heart to beat irregularly, or can cause inflammation, which could lead to a heart attack (Peters et al. 2001).

Attaining the California particulate matter standards would annually prevent about 6,500 premature deaths, or 3% of all deaths. These premature deaths shorten lives by an average of 14 years. This is roughly equivalent to the same number of deaths (4,200 to 7,400) linked to secondhand smoke in 2000. In comparison, motor vehicle crashes caused 3,200 deaths, and 2,000 deaths resulted from homicide. Attaining the California particulate matter and ozone standards would annually prevent 4,000 hospital admissions for respiratory disease, 3,000 hospital admissions for cardiovascular disease, and 2,000 asthma-related emergency room visits. Exposure to diesel particulate matter causes about 250 excess cancer cases per year in California.

Sulfates (SO₄²⁻)

Sulfates (SO₄²⁻) are particulate product that comes from the combustion of sulfur-containing fossil fuels. When sulfur monoxide (SO) or SO₂ is exposed to oxygen, it precipitates out into sulfates (SO₃ or SO₄). Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO₂ during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California because of regional meteorological features.

Health Effects

CARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in oxygen intake, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility and because they are usually acidic, can harm ecosystems and damage materials and property (CARB 2009).

Lead (Pb)

Lead (Pb) is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Historically, lead was used to increase the octane rating in automobile fuel. However, because the use of gasoline-powered automobile engines run on leaded fuels, a major source of airborne lead, has been mostly phased out, the ambient concentrations of lead have dropped dramatically.

Health Effects

Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ. Recent studies also show that lead may be a factor in high blood pressure and subsequent heart disease. Lead can also be deposited on the leaves of plants, presenting a hazard to grazing animals and humans through ingestion (USEPA 2012).

This highly toxic metal has been used for many years in everyday products and has been found to cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. Effects on the nervous systems of children are one of the primary health risk concerns from lead. In high concentrations, children can even suffer irreversible brain damage and death. Children 6 years old and under are most at risk, because their bodies are growing quickly.

If not detected early, children with high levels of lead in their bodies can suffer from damage to the brain and nervous system, behavior and learning problems (such as hyperactivity), slowed growth, hearing problems, and headaches.

Lead is also harmful to adults and can cause adults to suffer from difficulties during pregnancy, other reproductive problems (in both men and women), high blood pressure, digestive problems, nerve disorders, memory and concentration problems, and muscle and joint pain.

Since the 1980s, lead has been phased out in gasoline, reduced in drinking water, reduced in industrial air pollution, and banned or limited in consumer products.

Other Pollutants

The following is a general description of the source and health effects from other pollutants of concern, including other pollutants of hydrogen sulfide (H₂S), vinyl chloride, visibility-reducing particles, toxic air contaminants (TACs), diesel particulate matter (DPM), Airborne Fungus (Valley Fever), and asbestos.

Hydrogen Sulfide (H₂S)

Hydrogen sulfide (H₂S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. H₂S in the atmosphere would likely oxidize into SO₂ that can lead to acid rain. At low concentrations H₂S, which has a characteristic “rotten egg” smell, may cause irritation to the eyes, mucous membranes, and respiratory system; dizziness; and headaches. In high concentrations, hydrogen sulfide is extremely hazardous (800 ppm can cause death), especially in enclosed spaces. Occupational Safety and Health Administrations (OSHA) have the primary responsibility for regulating workplace exposure to H₂S.

Health Effects

Exposure to low concentrations of H₂S may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Exposure to higher concentrations (above 100 ppm) can cause olfactory fatigue, respiratory paralysis, and death. Brief exposures to high concentrations of H₂S (greater than 500 ppm) can cause a loss of consciousness. In most cases, the

person appears to regain consciousness without any other effects. However, in many individuals, there may be permanent or long-term effects such as headaches, poor attention span, poor memory, and poor motor function. No health effects have been found in humans exposed to typical environmental concentrations of H₂S (0.00011–0.00033 ppm). Deaths due to breathing in large amounts of H₂S have been reported in a variety of different work settings, including sewers, animal processing plants, waste dumps, sludge plants, oil and gas well drilling sites, and tanks and cesspools.

Vinyl Chloride

Vinyl chloride monomer is a sweet-smelling, colorless gas at ambient temperature. Landfills, publicly owned treatment works, and polyvinyl chloride (PVC) production are the major identified sources of vinyl chloride emissions in California. PVC can be fabricated into several products, such as PVC pipes, pipe fittings, and plastics.

Health Effects

In humans, epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of liver angiosarcoma, which is a rare cancer, and have suggested a relationship between exposure cancers of the lung and brain. There are currently no adopted ambient air standards for vinyl chloride. Short-term exposure to vinyl chloride has been linked with the following acute health effects (USEPA 2000):

- Acute exposure of humans to high levels of vinyl chloride through inhalation has resulted in effects on the central nervous system, such as dizziness, drowsiness, headaches, and giddiness.
- Vinyl chloride is reported to be slightly irritating to the eyes and respiratory tract in humans. Acute exposure to extremely high levels of vinyl chloride has caused loss of consciousness; irritation to the lungs and kidneys; inhibition of blood clotting in humans; and cardiac arrhythmias in animals.
- Tests involving acute exposure of mice to vinyl chloride have shown high acute toxicity from inhalation exposure to the substance.

Long-term exposure to vinyl chloride concentrations has been linked with the following chronic health effects (USEPA 2000):

- Liver damage may result in humans from chronic exposure to vinyl chloride, through both inhalation and oral exposure.
- A small percentage of individuals occupationally exposed to high levels of vinyl chloride in air have developed a set of symptoms termed “vinyl chloride disease,” which is characterized by Raynaud’s phenomenon (fingers blanch and numbness and discomfort are experienced upon exposure to the cold), changes in the bones at the end of the fingers, joint and muscle pain, and scleroderma-like skin changes (thickening of the skin, decreased elasticity, and slight edema).

- Central nervous system effects (including dizziness, drowsiness, fatigue, headache, visual and/or hearing disturbances, memory loss, and sleep disturbances) as well as peripheral nervous system symptoms (peripheral neuropathy, tingling, numbness, weakness, and pain in fingers) have also been reported in workers exposed to vinyl chloride.

Several reproductive/developmental health effects from vinyl chloride exposure have been identified (USEPA 2000):

- Several case reports suggest that male sexual performance may be affected by vinyl chloride. However, these studies are limited by lack of quantitative exposure information and possible co-occurring exposure to other chemicals.
- Several epidemiological studies have reported an association between vinyl chloride exposure in pregnant women and an increased incidence of birth defects, while other studies have not reported similar findings.
- Epidemiological studies have suggested an association between men occupationally exposed to vinyl chloride and miscarriages during their wives' pregnancies, although other studies have not supported these findings.
- Long-term exposure to vinyl chloride has also been identified as a cancer risk. Inhaled vinyl chloride has been shown to increase the risk of a rare form of liver cancer (angiosarcoma of the liver) in humans. Animal studies have shown that vinyl chloride, via inhalation, increases the incidence of angiosarcoma of the liver and cancer of the liver.

Visibility-Reducing Particles

This standard is a measure of visibility. The CARB does not yet have a measurement method that is accurate or precise enough to designate areas in the State as being in attainment or nonattainment. Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. Except for Lake County (which is designated to be in attainment), California's attainment status with respect to visibility-reducing particles is currently designated as unclassified.

Toxic Air Contaminants (TACs)

Hazardous air pollutants (HAPs) is a term used by the Federal CAA that includes a variety of pollutants generated or emitted by industrial production activities. Called toxic air contaminants (TACs) under the California Clean Air Act (CCAA) of 1988, 10 pollutants have been identified through ambient air quality data as posing the most substantial health risk in California. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to brain and nervous system, and respiratory disorders. The CARB provides emission inventories for only the larger air basins.

Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. TACs do not have ambient air quality standards. Since no safe levels of TACs can be determined, there are no air quality standards for TACs. Instead, TAC impacts are evaluated by

calculating the health risks associated with a given exposure. The requirements of the Air Toxic “Hot Spots” Information and Assessment Act apply to facilities that use, produce, or emit toxic chemicals. Facilities that are subject to the toxic emission inventory requirements of the CCAA must prepare and submit toxic emission inventory plans and reports to the CARB and periodically update those reports. While TACs do result in potential health risks for those exposed, the proposed project would not emit TACs except for DPM; therefore, only DPM is described further in this analysis.

Diesel Particulate Matter (DPM)

DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled engines contribute about 24% of the Statewide total, with an additional 71% attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about 5% of total DPM.

Health Effects

Diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde, and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any TAC evaluated by the California Office of Environmental Health Hazard Assessment (COEHHA). CARB estimates that about 70% of the cancer risk that the average Californian faces from breathing TACs stems from diesel exhaust particles (CARB, 2000).

In its comprehensive assessment of diesel exhaust, the COEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers who were not exposed to diesel emissions. These studies provide strong evidence that long-term occupational exposure to diesel exhaust increases the risk of lung cancer. Using information from COEHHA’s assessment, CARB estimates that diesel-particle levels measured in California’s air in 2000 could cause 540 “excess” cancers (beyond what would occur if there were no diesel particles in the air) in a population of 1 million people over a 70-year lifetime. Other researchers and scientific organizations, including the National Institute for Occupational Safety and Health (NIOSH), have calculated cancer risks from diesel exhaust that are similar to those calculated by the COEHHA and CARB.

Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Diesel engines are a major source of fine-particle pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Numerous studies have linked elevated particle levels in the air to increased hospital

admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can reduce lung function in children. In California, diesel exhaust particles have been identified as carcinogens (COEHHA 2020).

Airborne Fungus (Valley Fever)

Coccidioidomycosis, commonly referred to as San Joaquin Valley Fever or Valley Fever, is one of the most studied and oldest known fungal infections. Valley Fever most commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI). CI spores are found in the top few inches of soil and the existence of the fungus in most soil areas is temporary. The cocci fungus lives as a saprophyte in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus "blooms" and forms many tiny spores that lie dormant in the soil until they are stirred up by wind, vehicles, excavation, or other ground-moving activities and become airborne. Agricultural workers, construction workers, and other people who work outdoors and who are exposed to wind and dust are more likely to contract Valley Fever. Children and adults whose hobbies or sports activities expose them to wind and dust are also more likely to contract Valley Fever. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Approximately 60% of Valley Fever cases are mild and display flu-like symptoms or no symptoms at all. Of those who are exposed and seek medical treatment, the most common symptoms include fatigue, cough, loss of appetite, rash, headache, and joint aches. In some cases, painful red bumps may develop on the skin.

One important fact to mention is that these symptoms are not unique to Valley Fever and may be caused by other illnesses as well. Identifying and confirming this disease require specific laboratory tests such as: (1) microscopic identification of the fungal spherules in infected tissue, sputum, or body fluid sample; (2) growing a culture of CI from a tissue specimen, sputum, or body fluid; (3) detection of antibodies (serological tests specifically for Valley Fever) against the fungus in blood serum or other body fluids; and (4) administering the Valley Fever Skin Test (called coccidioidin or spherulin), which indicates prior exposure to the fungus (Valley Fever Center for Excellence 2019a). It should be noted that the portion of Kern County that resides within the SJVAB has the highest incident rate for Valley Fever within California.

Valley Fever is not contagious and therefore cannot be passed on from person to person. Most of those who are infected would recover without treatment within six months and would have a life-long immunity to the fungal spores. In severe cases, especially in those patients with rapid and extensive primary illness, those who are at risk for dissemination of disease, and those who have disseminated disease, antifungal drug therapy is used. The type of medication used and the duration of drug therapy are determined by the severity of disease and response to the therapy. The medications used include ketoconazole, itraconazole, and fluconazole in chronic, mild-to-moderate disease, and amphotericin B, given intravenously or inserted into the spinal fluid, for rapidly

progressive disease. Although these treatments are often helpful, evidence of disease may persist, and years of treatment may be required (Valley Fever Center for Excellence 2019b).

Table 4.3-4, *Range of Valley Fever Cases*, presents the range of Valley Fever cases based on research conducted by the Valley Fever Center for Excellence.

Table 4.3-4: *Range of Valley Fever Cases*

Infection Classification	Percent of Total Diagnosed Cases
Unapparent infections	60%
Mild to moderate infections	30%
Infections resulting in complications	5–10%
Fatal infections	<1%

Source: Valley Fever Center for Excellence 2019c.

The usual course of Valley Fever in healthy people is complete recovery within 6 months. In most cases, the body's immune response is effective, and no specific course of treatment is necessary. About 5% of cases of Valley Fever result in pneumonia (infection of the lungs), while another 5% of patients develop lung cavities after their initial infection with Valley Fever. These cavities occur most often in older adults, usually without symptoms, and about 50% of them disappear within 2 years. Occasionally, these cavities rupture, causing chest pain and difficulty breathing, and require surgical repair. Only 1% to 2% of those exposed who seek medical attention would develop a disease that disseminates (spreads) to other parts of the body other than the lungs (Valley Fever Center for Excellence 2019c).

Factors that affect the susceptibility to coccidioidal dissemination are race, sex, pregnancy, age, and immunosuppression. While there are no racial or gender differences in susceptibility to primary infection with coccidioidomycosis, differences in risk of disseminated infection do appear to exist. Men have a higher rate of dissemination than do women and several studies have shown that the rate of dissemination in African Americans and Filipinos is several times higher than in the rest of the U.S. population. Native Americans, Hispanics and Asians may also have a higher rate of dissemination than the general population, but these population differences are not well defined (Valley Fever Center for Excellence 2019d).

The CI fungal spores are often found in the soil around rodent burrows, Indian ruins, and burial grounds. The spores become airborne when the soil is disturbed by winds, construction, farming, and soil-disturbing activities. This type of fungus is endemic to the southwestern United States and more common in Kern County. The ecological factors that appear to be most conducive to the survival and replication of the fungal spores are high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils. During drought years, the number of organisms competing with CI decreases, and the CI remains alive but dormant. When rain finally occurs, the arthroconidia germinate and multiply more than usual because of a decreased number of other competing organisms. Later, the soil dries out in the summer and fall, and the fungi can become airborne and potentially infectious.

Asbestos

The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90% to 95% of all asbestos contained in buildings in the United States. Asbestos

occurs in certain geologic environments that contain serpentinite and ultramafic rocks, which are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties associated with the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. According to information provided by the California geologic Survey, the project site is not located in an area where naturally occurring asbestos is likely to be present (California Geological Survey [CGS] 2011).

Asbestos can only adversely affect humans in its fibrous form and these fibers must be broken and dispersed into the air and then inhaled. During geological processes, the asbestos mineral can be crushed, causing it to become airborne. It also enters the air or water from the breakdown of natural deposits. Constant exposure to asbestos at high levels on a regular basis may cause cancer in humans. The two most common forms of cancer are lung cancer and mesothelioma, a rare cancer of the lining that covers the lungs and stomach.

Coronavirus Disease 2019 (COVID-19)

Coronavirus Disease 2019 (COVID-19) is a new disease, caused by a novel (or new) human coronavirus that has not previously been seen in humans. The first known case of COVID-19 was confirmed in the United States on January 20, 2020 (Holshue et al. 2020). There are many types of human coronaviruses, including some that commonly cause mild upper-respiratory tract illnesses. COVID-19 is a respiratory illness that can spread from person to person. According to the Center for Disease Control (CDC), older adults and people who have severe underlying medical conditions like heart or lung disease or diabetes seem to be at higher risk for developing more serious complications from COVID-19 illness. Symptoms may appear 2 to 14 days after exposure to the virus and may include, but are not limited to, fever or chills, cough, shortness of breath or difficulty breathing, fatigue, muscle or body aches, headache, loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, and diarrhea (CDC 2020a). According to the CDC, COVID-19 is believed to spread between people who are in close contact with one another (within about 6 feet) through respiratory droplets produced when an infected person coughs, sneezes, or talks (CDC 2020b). COVID-19 research and causality are still in the beginning stages. A nationwide study by Harvard University found a linkage between long-term exposure to PM_{2.5} (averaged from 2000–2016) as air pollution and statistically significant increased risk of COVID-19 death in the United States (Wu et al. 2020).

Odors

Typically, odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from the psychological (i.e., irritation, anger, or anxiety) to the physiological (e.g., circulatory and respiratory effects, nausea, vomiting, headache). The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor and in fact an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then

the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Neither the state nor the Federal governments have adopted rules or regulations for the control of odor sources. The SJVAPCD does not have an individual rule or regulation that specifically addresses odors; however, odors would be subject to SJVAPCD's Rule 4102, Nuisance. Any actions related to odors would be based on citizen complaints to local governments and the SJVAPCD.

4.3.3 Regulatory Setting

In California, air quality is regulated by several agencies, including USEPA, CARB, and local air districts such as the SJVAPCD. Each of these agencies develops rules and/or regulations to attain the goals or directives imposed upon them through legislation. Although USEPA regulations may not be superseded, some State and local regulations may be more stringent than federal regulations. The project site is located within the Kern County portion of the SJVAB, which is under the jurisdiction of the SJVAPCD. SJVAPCD has developed CEQA guidance for assessing air quality impacts. In addition, Kern County has its own CEQA guidelines for assessing air quality impacts.

Federal

U.S. Environmental Protection Agency (USEPA)

The principal air quality regulatory mechanism on the federal level is the CAA and in particular, the 1990 amendments to the CAA and the NAAQS that it establishes. These standards identify levels of air quality for "criteria" pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The criteria pollutants include ozone, CO, NO₂ (which is a form of NO_x), SO₂ (which is a form of SO_x), PM₁₀, PM_{2.5}, and lead. USEPA also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf), and those that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking. USEPA's primary role at the state level is to oversee the state air quality programs. USEPA sets federal vehicle and stationary source emission standards and oversees approval of all State Implementation Plans (SIP), as well as providing research and guidance in air pollution programs. The SIP is a state level document that identifies all air pollution control programs within California that are designed to meet the NAAQS.

As shown in **Table 4.3-2**, *San Joaquin Valley Air Quality Attainment Status*, USEPA has designated the Kern County portion of the SJVAB, where the project site is located, as an extreme nonattainment area for the federal 8-hour ozone standard. The USEPA has designated the project area as being in attainment or unclassified with respect to all other NAAQS beside ozone.

State

California Air Resources Board (CARB)

CARB, a department of the California Environmental Protection Agency (Cal/EPA), oversees air quality planning and control throughout California by administering the SIP. CARB's primary responsibility lies in ensuring implementation of the 1989 amendments to the CCAA, responding to the federal CAA requirements and regulating emissions from motor vehicles sold in California, and sets fuel specifications to further reduce vehicular emissions.

The amendments to the CCAA establish the CAAQS, and a legal mandate to achieve these standards by the earliest practical date. These standards apply to the same criteria pollutants as the federal CAA, and also include sulfates, visibility reducing particulates, hydrogen sulfide and vinyl chloride (there are currently no NAAQS for these latter pollutants). They are also generally more stringent than the national standards in most cases, although recently promulgated NAAQS for 1-hour NO₂ and SO₂ can in some instances be more stringent than the respective CAAQS. As shown in **Table 4.3-2, San Joaquin Valley Air Quality Attainment Status**, above, the Kern County portion of the SJVAB is currently designated as non-attainment for the 1-hour and 8-hour state ozone standard, as well as the state 24-hour PM₁₀ and PM_{2.5} standards. Concentrations of all other pollutants are presumed to meet state standards as the area is designated as either attainment or unclassified.

CARB is also responsible for regulations pertaining to TACs. The Air Toxics "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release into their local air basin. Each air pollution control district ranks the data into high, intermediate and low priority categories. When considering the ranking, the potency, toxicity, quantity, volume and proximity of the project site to receptors are given consideration by an air district.

CARB also has on- and off-road engine emission-reduction programs that would indirectly affect the project's emissions through the phasing in of cleaner on- and off-road engines. Additionally, CARB has a Portable Equipment Registration Program that allows owners or operators of portable engines and associated equipment to register their units under a statewide program to operate their equipment which must meet specified program emission requirements, throughout California without having to obtain individual permits from local air districts. Since the project is not proposing to install any applicable stationary sources, the AB 2588 program would not apply to the project.

In 2007, CARB enacted a regulation for the reduction of diesel particulate matter and criteria pollutant emissions from in-use off-road diesel-fueled vehicles (13 CCR Article 4.8, Chapter 9, Section 2449). This regulation provides target emission rates for particulate matter and NO_x emissions for owners of fleets of diesel-fueled off-road vehicles. This regulation applies to equipment fleets of three specific sizes, and the target emission rates are reduced over time.

Title V and Extreme Designation

Title V of the CAA, as amended in 1990, creates an operating permit program for certain defined sources. In general, owner/operators of defined industrial or commercial sources that emit more than 25 tons per year (tpy) of NO_x and ROG must process a Title V permit. In “Extreme Designation” areas, the definition of a major source which requires Title V permitting, changes from 25 tpy to 10 tpy. This change results in more businesses having to comply with Title V permitting requirements under the Extreme nonattainment designation.

Title V does not impose any new air pollution standards, require installation of any new controls on the affected facilities, or require reductions in emissions. Title V does enhance public and USEPA participation in the permitting process and requires additional record keeping and reporting by businesses, which results in significant administrative requirements.

California Renewables Portfolio Standard Program

In 2002, Senate Bill (SB) 1078 established California’s Renewables Portfolio Standard (RPS) program. The RPS program requires electrical corporations and electric service providers to purchase a specified minimum percentage of electricity generated by eligible renewable energy resources. SB 1078 requires the California Energy Commission to certify eligible renewable energy resources, to design and implement an accounting system to verify compliance with the RPS by retail sellers, and to allocate and award supplemental energy payments to cover above-market costs of renewable energy. Under SB 1078, each electrical corporation was required to increase its total procurement of eligible renewable energy resources by at least one percent per year so that 20 percent of its retail sales were procured from eligible renewable energy resources.

In 2006, SB 107 accelerated the RPS program by establishing a deadline of December 31, 2010, for achieving the goal of having 20 percent of total electricity sold to retail customers in California per year generated from eligible renewable energy resources.

In 2008, the RPS goal was increased to 33 percent under Executive Order S-14-08, which was later superseded by Executive Order S-21-09 in 2009. Executive Order S-21-09 directed CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. In 2010, CARB approved a Renewable Electricity Standard regulation.

In 2011, the California Senate passed legislation paralleling and expressly superseding CARB’s RPS program rules. Pursuant to SB 1X-2, the statutory RPS was increased to 33 percent and expanded the RPS program to include customer-owned utilities. In addition, SB 1X-2 limits the use of out-of-state tradable renewable energy certificates to 25 percent in 2013, 15 percent in 2016, and 10 percent thereafter.

In 2015, the Clean Energy and Pollution Act of 2015 (SB 350) increased the RPD goal from 33 percent to 50 percent by 2030. SB 350 required local publicly owned electric utilities to establish annual targets for energy efficiency savings and demand reduction consistent with this goal.

Local

Kern County General Plan

The goals, policies, and implementation measures in the Kern County General Plan applicable to air quality, as related to the project, are included in the Land Use, Conservation, and Open Space Element, provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development such as the proposed project. These measures are not listed below, but as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the *Kern County General Plan* are incorporated by reference.

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

1.10.2 Air Quality

Goal

- **Goal 1.** Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

Policies

- **Policy 18.** The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be placed on minimizing air quality degradation in the desert to enable effective military operations and in the valley region to meet attainment goals.
- **Policy 19.** In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision making body, as part of its deliberations, will ensure that:

All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and

The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.

- **Policy 20.** The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District on ministerial permits.
- **Policy 21.** The County shall support air districts efforts to reduce PM₁₀ and PM_{2.5} emissions.

- **Policy 22.** Kern County shall continue to work with the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District toward air quality attainment with federal, state, and local standards.
- **Policy 23.** The County shall continue to implement the local government control measures in coordination with the Kern Council of Governments and the San Joaquin Valley Unified Air Pollution Control District.

Implementation Measures

- **Implementation Measure F.** All discretionary permits shall be referred to the appropriate air district for review and comment.
- **Implementation Measure G.** Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:
 - a. Minimizing idling time.
 - b. Electrical overnight plug-ins.
- **Implementation Measure H.** Discretionary projects may use one or more of the following to reduce air quality effects:
 - a. Pave dirt roads within the development.
 - b. Pave outside storage areas.
 - c. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
 - d. Use of alternative fuel fleet vehicles or hybrid vehicles.
 - e. Use of emission control devices on diesel equipment.
 - f. Develop residential neighborhoods without fireplaces or with the use of.
 - g. Environmental Protection Agency certified, low emission natural gas fireplaces.
 - h. Provide bicycle lockers and shower facilities on site.
 - i. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
 - j. The use and development of park and ride facilities in outlying areas.
 - k. Other strategies that may be recommended by the local Air Pollution Control Districts.

- **Implementation Measure J.** The County should include PM₁₀ control measures as conditions of approval for subdivision maps, site plans, and grading permits.

In 2006, Kern County issued its own *Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports* (Kern County Air Quality Assessment Guidelines). The document provides specific guidance for County-prepared EIRs, including air quality issues to be considered, analytical approaches and resources, and a cumulative impact analysis methodology. In general, Kern County defers to SJVAPCD on issues related to assessing air quality impacts (e.g., modeling, odors, risk assessment). In addition, Kern County recommends an assessment of visibility impacts for all industrial projects and any other projects that have components that could generate dust or emissions related to visibility. All Class I areas located within 100 kilometers of the project site, Edwards Air Force Base, China Lake Naval Weapons Station, and the entire R-2508 Airspace Complex should be included in the analysis. In addition, the County requires a list of projects located within a one-mile and six-mile radius of the project boundary.

South Kern Industrial Center Specific Plan (SKICSP)

The proposed project is within the South Kern Industrial Center (SKIC). The SKIC consists of approximately 744 acres which are planned for in the SKIC Specific Plan (SKICSP). The SKICSP is located approximately 18 miles southwest of Bakersfield and approximately 7 miles east of Taft, in unincorporated Kern County. The composting Facility was approved by Kern County under Conditional Use Permit 2, Map 158 (Existing CUP) on October 2002, along with a Supplemental Environmental Impact Report which was certified on the same date (collectively “Existing Entitlements”). Subsequent to the approvals, the Facility underwent construction and began operations in 2006. The project site is located within the SKICSP, which was first amended on October 22, 2002 and processed a second amendment on June 21, 2021 (SPA 159, Map 500). Board of Supervisors agenda. The purpose of the SKICSP is to be used as a planning tool to closely define the planning criteria of the specific plan area and to define the nature and extent of growth and to ensure orderly development. The SKICSP was designed to achieve three primary goals: 1) implement the Kern County General Plan, 2) establish of development standards, and 3) guide the planned development of the SKIC.

Measures contained in the SKICSP related to air quality include requiring dust control measures and that developments are designed in accordance with local air quality programs. In Kern County, specific plans, such as the SKICSP, are used to implement goals, objectives, and policies of the Kern County General Plan in a more detailed and refined manner unique to a smaller area of the County. Accordingly, the applicable goals and policies, within the SKICSP, are consistent with those contained in the applicable policies, goals, and implementation measures of the Kern County General Plan. Applicable goals and policies related to hydrology and water quality are listed below:

Land Use Element

Implementation Measures

- **Implementation Measure 16.** Areas devoted to outside storage shaft be treated with a dust binder or other dust control measures, as approved by the Kern County

Planning Director Screening, if required by the base district regulations, shall also be provided.

- **Implementation Measure 17.** Every effort shall be made to control dust during construction activities by watering the site or by using an approved soil binder (i.e. burlap, fast grow grasses) to reduce fugitive dust, both during construction and operational phases.
- **Implementation Measure 22.** Development shall be in accordance with standards of the local Air Quality Maintenance Program (AQMP) and when required shall be reviewed by San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) prior to the issuance of building permits.

Environmental Resource Management Element

Policies

- **Policy 6:** Incorporate standards established in the Kern County Air Maintenance Plan

San Joaquin Valley Air Pollution Control District

The SJVAPCD has primary responsibility for regulating stationary sources of air pollution situated within its jurisdictional boundaries. To this end, the SJVAPCD implements air quality programs required by State and federal mandates, enforces rules and regulations based on air pollution laws, and educates businesses and residents about their role in protecting air quality. The SJVAPCD is also responsible for managing and permitting existing, new, and modified sources of air emissions within the Kern County portion of San Joaquin Valley Air Basin.

The SJVAPCD has developed the following plans to attain and maintain the State and Federal standards:

1. The 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standard.
2. The 2016 Plan for the 2008 8-hr Ozone Standard.
3. The 2013 Plan for the Revoked 1-hour Ozone Standard.
4. The 2004 Revisions to the Carbon Monoxide Maintenance Plan.

One-Hour Ozone Plan

The CARB submitted the SJVAPCD's 2004 Extreme Ozone Attainment Demonstration Plan to the USEPA on November 15, 2004. The plan was amended by the SJVAPCD in 2008. Effective June 15, 2005, the USEPA revoked the Federal 1-hour ozone ambient air quality standard, finding that the 8-hour ozone standard was more health protective. Under Federal anti-backsliding provisions, the SJVAPCD has continued to implement the 2004 plan's control measures and emissions

reductions strategies. The District developed a new plan for USEPA's revoked 1-hour ozone standard, which was adopted by the SJVAPCD's Governing Board on September 19, 2013.

Eight-Hour Ozone Plan

The SJVAPCD adopted the 2007 Ozone Plan on April 30, 2007. This far-reaching plan, with innovative measures and a "dual path" strategy, ensures expeditious attainment of the Federal 8-hour ozone standard established by the USEPA in 1997. The plan projects that the SJVAB will achieve the 8-hour ozone standard for all areas of the SJVAB no later than 2023. The CARB approved the plan on June 14, 2007. The USEPA approved the 2007 Ozone Plan effective April 30, 2012. The more stringent 8-hour ozone standard was adopted June 16, 2016.

PM10 Maintenance Plan

Based on PM10 measurements from 2003–2006, the USEPA found that the SJVAB has achieved the Federal PM10 NAAQS. On September 21, 2007, the SJVAPCD's Governing Board adopted the 2007 PM10 Maintenance Plan and Request for Redesignation. This plan demonstrates that the SJVAB will continue to meet the PM10 standard. The USEPA approved the document and effective December 12, 2008, the SJVAB was redesignated to attainment for the PM10 NAAQS.

2008 PM2.5 Plan

The SJVAB is designated nonattainment for Federal PM2.5 standards. The USEPA established its first PM2.5 standards in 1997. The USEPA strengthened the 24-hour standard in 2006 and the annual standard in 2013. Building on the strategy used in the 2007 Ozone Plan, the SJVAPCD agreed to additional control measures to reduce directly produced PM2.5. The SJVAPCD's Governing Board adopted the 2008 PM2.5 Plan on April 30, 2008. The plan demonstrates that the SJVAB will achieve the 1997 annual PM2.5 NAAQS of 15 micrograms. The CARB approved the plan on May 22, 2008. The USEPA approved most provisions of the 2008 PM2.5 Plan effective January 9, 2012.

2012 PM2.5 Plan

The SJVAPCD adopted the 2012 PM2.5 Plan on December 20, 2012. The plan demonstrates that the SJVAB will achieve the 2006 24-hour PM2.5 NAAQS of 35 $\mu\text{g}/\text{m}^3$ by 2019. The CARB approved the plan on January 24, 2013. The SJVAPCD will need to revise its PM2.5 strategy in the future to address attainment of the 2013 annual standard. These plans include emissions inventories; projected changes in population, vehicles, fuels, and equipment; and the consequent changes in the associated emission levels. The plans then identify existing rules and additional proposed measures required to reduce emissions and ensure compliance with the ambient air quality standards. These rules and proposed measures include requirements to obtain permits to construct and operate, and rules regulating the allowable emissions from various activities or classes of equipment.

2009 Reasonably Available Control Technology Demonstration for Ozone State Implementation Plans (RACT SIP)

On April 16, 2009, the Governing Board adopted the Reasonably Available Control Technology Demonstration for Ozone State Implementation Plans (2009 RACT SIP) (SJVAPCD 2009a). In part, the 2009 RACT SIP satisfied the commitment by the SJVAPCD for a new RACT analysis for the 1-hour ozone plan (see discussion of the EPA withdrawal of approval in the Extreme 1-Hour Ozone Attainment Demonstration Plan summary above) and was intended to prevent all sanctions that could be imposed by EPA for failure to submit a required SIP revision for the 1-hour ozone standard. With respect to the 8-hour standard, the plan also assesses the SJVAPCD's rules based on the adjusted major source definition of 10 tons per year (due to the SJVAB's designation as an extreme ozone nonattainment area), evaluates SJVAPCD rules against new Control Techniques Guidelines promulgated since August 2006, and reviews additional rules and rule amendments that had been adopted by the Governing Board since August 17, 2006, for RACT consistency.

2013 Plan for the Revoked 1-Hour Ozone Standard

The SJVAPCD developed a plan for the USEPA's revoked 1-hour ozone standard after the USEPA withdrew its approval of the 2004 Extreme 1-Hour Ozone Attainment Demonstration Plan as a result of litigation. As a result of the litigation, the USEPA reinstated previously revoked requirements for 1-hour ozone attainment plans. The 2013 plan addresses those requirements, including a demonstration of implementation of Reasonably Available Control Measures and a demonstration of a rate of progress averaging 3% annual reductions of ROG or NOX emissions every 3 years. The 2013 Plan for the Revoked 1-Hour Ozone Standard was approved by the Governing Board on September 19, 2013 (SJVAPCD 2013). Based on implementation of the ongoing control measures, preliminary modeling indicates that the SJVAB will attain the 1-hour ozone standard by 2017, before the final attainment year of 2022 and without relying on long-term measures under CAA Section 182(e)(5) ("black box reductions").

2014 Reasonably Available Control Technology Demonstration for Ozone State Implementation Plans (RACT SIP)

On June 19, 2014, the SJVAPCD adopted the 2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan (2014 RACT SIP) (SJVAPCD 2014). This RACT SIP includes a demonstration that the SJVAPCD rules implement RACT. The plan reviews each of the NOX reduction rules and concludes that they satisfy requirements for stringency, applicability, and enforceability and meet or exceed RACT. The plan's analysis of further ROG reductions through modeling and technical analyses demonstrates that added ROG reductions will not advance SJVAB's ozone attainment. Each ROG rule evaluated in the 2009 RACT SIP, however, has been subsequently approved by the USEPA as meeting RACT within the last 2 years. The ozone attainment strategy, therefore, focuses on further NOX reductions.

In 1998, SJVAPCD adopted its *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) to provide lead agencies, consultants, and project applicants with uniform procedures for addressing air quality in environmental documents. SJVAPCD subsequently revised its

GAMAQI document in 2002 and then again in 2015. Key elements of the 2015 GAMAQI document that are evaluated as part of this analysis include:

- **CAP Emissions Thresholds:** These thresholds have been developed for construction and operational emissions, as specified in **Table 4.3-5, Air Quality Thresholds of Significance for Criteria Pollutants, Operational Emissions**, below.

Table 4.3-5: Air Quality Thresholds of Significance for Criteria Pollutants, Operational Emissions (ton/year)

Pollutant/ Precursor	Construction Emissions (ton/year)	Permitted Equipment and Activities	Non-Permitted Equipment and Activities
CO	100	100	100
NO _x	10	10	10
ROG	10	10	10
SO _x	27	27	27
PM ₁₀	15	15	15
PM _{2.5}	15	15	15

Source: Insight Environmental Consultants, 2020.

As indicated in the 2015 GAMAQI, permitted sources and activities are subject to SJVAPCD Regulation II (Permits), notably Rule 2201 (New and Modified Stationary Source Review) and Rule 2301 (Emission Reduction Credit Banking). Rule 2201 requires that any emission increases from new permitted stationary sources are mitigated by emission offsets. In most cases, permitted stationary source emissions, therefore, would be reduced or mitigated to below the SJVAPCD's recommended significance thresholds.

- **CAP Modeling:** When assessing the significance of project-related impacts on air quality, impacts may be significant when emission increases from construction activities or operational activities exceed SJVAPCD's 100 pounds per day screening level, which is applicable to any criteria pollutant after implementation of all enforceable mitigation measures. When onsite emissions are in excess of the screening threshold, SJVAPCD recommends that an ambient air quality analysis be performed. An ambient air quality analysis uses air dispersion modeling (e.g., atmospheric dispersion modeling system (AERMOD)) to determine if emission increases from a project will cause or contribute to a violation of the ambient air quality standards. SJVAPCD's March 2015 GAMAQI states that a project should be considered to have a significant impact if its emissions would cause or contribute to a violation of any CAAQS or NAAQS.
- **Assessment of Carbon Monoxide (CO) Impacts:** Due to the fact that increased CO concentrations are usually associated with roadways that are congested and with heavy traffic volume, SJVAPCD has established that preliminary screening can be used to determine if a project would result in a CO hotspot at any given intersection. SJVAPCD has established that if neither of the following criteria are met at all intersections affected by the project, the project will result in no potential to create a violation of the CO air quality standard:

- A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or
- A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at more intersections in the project vicinity.

If either of the above criteria can be associated with any intersection affected by the project, the applicant/consultant would need to conduct a CO analysis to determine a project's significance.

The SJVAPCD is required to submit a "Rate of Progress" document to the CARB that demonstrates past and planned progress toward reaching attainment for all criteria pollutants. The CCAA requires air pollution control districts with severe or extreme air quality problems to provide for a five percent reduction in nonattainment emissions per year. The Air Quality Attainment Plan (AQAP) prepared for the San Joaquin Valley by the SJVAPCD complies with this requirement. The CARB reviews, approves, or amends the document and forwards the plan to the USEPA for final review and approval within the SIP.

- **Odor Assessment:** SJVAPCD recommends that odors associated with a proposed project should be evaluated on a case-by-case basis and suggests a two-part process for evaluating a project's potential odor impacts. Initially, the proximity of a potential odor generator with respect to sensitive receptors (residences, schools, day care centers, hospital, etc.) should be compared to District recommended odor screening distances. For composting facilities, SJVAPCD recommends more detailed analysis of potential odor impacts if sensitive receptors are located within one mile of an odor source. If receptors are located within the recommended screening distance, SJVAPCD suggests that the odors should be assessed qualitatively, taking into consideration project design elements, local meteorological conditions, and the nature of the odor source. SJVAPCD also recommends reviewing historical odor complaints in the project vicinity.
- **Health Risk Assessment (HRA):** SJVAPCD's thresholds of significance for health risks associated with TACs emitted from project operations are as follows:
 - Carcinogens: increased cancer risk of 20 per one million or greater for the maximally exposed individual.
 - Non-Carcinogens: hazard index of 1 or greater for the maximally exposed individual. Note that the hazard index is expressed as a ratio of exposure levels to acceptable levels.

SJVAPCD recommends that risk assessments be conducted in accordance with California Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines.

SJVAPCD Rules and Regulations

The SJVAPCD has established the following rules and regulations to ensure compliance with local, State, and federal air quality regulations:

Rule 2010 - Authority to Construct and Permit to Operate

Rule 2010 requires owners of any new or modified equipment that emits, reduces, or controls air contaminants, except those specifically exempted by the SJVAPCD, to apply for an Authority to Construct and Permit to Operate.

Rule 2020 – Exemptions

Rule 2020 specifies criteria that emission units must meet to be exempt from SJVAPCD permit requirements. The rule also specifies the recordkeeping requirements to verify the exemption and outlines the compliance schedule for emission units that lose the exemption after installation. Rule 2020 applies to any source that emits or may emit air contaminants.

Rule 2201 - New and Modified Stationary Source Review

Rule 2201 requires that any emission increases from new permitted stationary sources are mitigated by emission offsets. In most cases, permitted stationary source emissions, therefore, will be reduced or mitigated to below the SJVAPCD's recommended significance thresholds (SJVAPCD, 2015).

Rule 2520 – Federally Mandated Operating Permits

Operating permits are required for major sources with a potential to emit (PTE) over specific thresholds that are based on the attainment status of the area, major sources of hazardous air pollutants (HAPs), or which are subject to certain federal regulations. This requirement comes from Title V of the Clean Air Act Amendments of 1990. Consequently, these types of operating permits are frequently called Title V permits. In the San Joaquin Valley, Title V permits are issued by the SJVAPCD pursuant to Rule 2520.

Regulation III – Fees

Regulation III (Rules 3010–3901) is a series of rules covering fee requirements within the air basin.

Regulation IV – Prohibitions

Regulation IV (Rules 4001–4905) is a series of rules covering prohibitions within the air basin.

Rule 4565 – Biosolids, Animal Manure, and Poultry Litter Operations

Receipt of biosolids and animal waste material is proposed as part of this project. Therefore, the requirements of this rule apply to the handling and processing of these materials. For compost operations processing more than 100,000 wet tons per year, the rule requires that the facility implement mitigation measures as specified in the rule. The Facility is expected to be in compliance with the applicable rule requirements for the biosolids and animal waste disposal and composting.

Rule 4566 - Organic Material Composting Operations

Rule 4566 regulates organic material composting operations. Rule 4566 controls VOC emissions from composting operations. Additionally, Rule 4566 mandates controlling at least 80 percent of the VOC emissions that are the common cause of odor issues at uncontrolled composting facilities.

Rule 8021 – Dust Control Plan

Rule 8021 Section 6.3, requires applicants to develop, prepare, submit, obtain approval of, and implement a Dust Control Plan, which would reduce fugitive dust impacts to less than significant for all construction phases of a project, which would also control the release of the *Coccidioides immitis* fungus from construction activities.

Rule 8031 – Bulk Materials

The purpose of the rule is to limit fugitive dust emissions from the outdoor handling, storage, and transport of bulk materials. The rule applies to the outdoor handling, storage, and transport of any bulk material.

Rule 8041 – Carryout and Track-Out

This rule limits fugitive dust emissions from carryout and track-out. The rule applies to all sites that are subject to any of the following rules where carryout or track-out has occurred or may occur on paved public roads or the paved shoulders of a paved public road: Rules 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities), 8031 (Bulk Materials), 8061 (Paved and Unpaved Roads), and 8071 (Unpaved Vehicle and Equipment Traffic Areas).

Rule 8051 – Open Areas

The purpose of this rule is to limit fugitive dust emissions from open areas. This rule applies to any open area having 0.5 acres or more within urban areas or 3.0 acres or more within rural areas that contains at least 1,000 square feet of disturbed surface area.

Rule 8061 – Paved and Unpaved Roads

This rule limits fugitive dust emissions from paved and unpaved roads by implementing control measures and design criteria. This rule applies to any new or existing public or private paved or unpaved road, road construction project, or road modification project.

Rule 8071 – Unpaved Vehicle/Equipment Traffic Areas

The purpose of this rule is to limit fugitive dust emissions from unpaved vehicle and equipment traffic areas. This rule applies to any unpaved vehicle/equipment traffic area.

Air Quality Conformity Determination for Transportation Plans and Programs

The CAA amendments of 1990 require a finding to be made stating that any project, program, or plan subject to approval by a metropolitan planning organization conforms to air plans for attainment of air quality standards. Kern Council of Governments (COG) is designated the Regional Transportation Planning Agency and Metropolitan Planning Organization for Kern County. In that capacity, Kern COG models air quality projections on population projections in conjunction with current general plan designations and estimated vehicle miles as well as the current Regional Transportation Plan (RTP) and the federal transportation plan for Kern County. These results are compared to pollutant budgets for each basin approved by USEPA in the 1999 base year. Kern County is contained within two air basins: the SJVAB and the Mojave Desert Air Basin. Each air basin has its own plans and pollutant budgets. Kern COG makes conformity findings for each air basin.

Kern County recently prepared a draft 8-hour ozone air quality conformity analysis to analyze Kern County's federally approved Federal Transportation Improvement Program (FTIP) and the Destination 2030 RTP. Changes to the federal air quality standards for ozone from a 1-hour measurement to an 8-hour measurement have triggered the need for this analysis. The FTIP for the Kern County region is a six-year schedule of multimodal transportation improvements, and the RTP is a long-range, 26-year transportation plan. The conformity findings conclude that the FTIP and RTP result in emissions that are less than the emission budgets of baseline emissions for CO, VOC, NO_x, and PM₁₀.

4.3.4 Impacts and Mitigation Measures

Methodology

The Air Quality Impact Analysis (AQIA) and technical memorandum for the proposed project prepared by Trinity Consultants and included as Appendix B was prepared pursuant to the GAMAQI and the Kern County Air Quality Assessment Preparation Guidelines of the Kern County CEQA Implementation Document (County of Kern Planning Department, 2006). The County guidance was developed by the Kern County Planning and Natural Resources Department to assist with the preparation of the air quality assessments for use as a technical document in EIRs. This County guidance, called the "Guidelines for Preparing Air Quality Assessments for Use in EIRs" is intended to ensure that the assumptions and methodology used in the County's environmental documents are uniform from one project to the next to facilitate the comparison of air quality environmental effects. The County guidance states that the most recent air quality guidance documents from the SJVAPCD, such as the GAMAQI, must be used and referenced in the preparation of an air quality assessment and that the latest version of all models must be used for the appropriate application. It also notes that where the Kern County Planning and Natural Resources Department guidelines require quantification and the SJVAPCD does not; therefore, for purposes of CEQA, the Kern County Planning and Natural Resources Department guidelines must be followed.

Kern County guidance states that an air quality assessment should include estimates of short-term construction emissions in tons per year. The estimates must include site grading and building

construction emissions, with comparison to the adopted County CEQA thresholds and the applicable air district (SJVAPCD for western Kern County) thresholds. Per the County's guidance, all assumptions should be clearly presented, including length of each construction phase, equipment that will be used during each phase, and the amount of soil disturbance, including any import or export of soil. The emission factors used to estimate emissions should be clearly documented, and the model output should be included in the report.

The SJVAPCD guidance, GAMAQI, states that the latest SJVAPCD-approved models should be used to conduct an air quality analysis. The current recommended model to estimate potential project-generated criteria air pollutant emissions from construction is the California Emissions Estimator Model (CalEEMod), Version 2016.3.2 (available on-line at www.caleemod.com). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria air pollutant emissions from a variety of land use projects.

Baseline Emissions

In order to determine actual emission impacts posed by the proposed project, the AQIA reviewed the composting operations for a 10-year period (2008 – 2017) to establish a “baseline” from actual emissions. The 10 years of operational data was for non-stationary source (mobile) emissions from actual site-based equipment and operator knowledge of delivery and employee vehicles. These values were compared against the emission that would occur from the proposed action and the “net change” was established. Determining the “net change” from an established baseline is a common and accepted measurement of emissions impacts under CEQA. This methodology was used, as opposed to using the baseline emissions totals from the original EIR or supplemental EIR, because it is based on current operational data and provides an accurate measure of existing conditions.

Project Emissions

The GAMAQI identifies thresholds that separate a project's short-term and long-term emissions. Project emissions were estimated for the following project development stages:

- **Short-term (Construction and Demolition):** Construction emissions of the proposed project were estimated in CalEEMod using applicant assumptions for equipment and construction schedule for the development of the project.
- **Long-term (Operations):** Long term emissions were estimated using CalEEMod, EMFAC2017, WARM Model, AP-42, and stationary source emission factors.

Short-term Emissions (Construction)

Short-term emissions are primarily from the construction phase of a project and would have temporary impacts on air quality.

The project applicant provided a list of specific construction equipment and timeline and were therefore used in estimating the construction emissions should the composting facilities be

extended into the area already permitted under the existing CUP. Applying project applicant assumptions and model defaults, construction emissions were projected based on the estimated construction schedule. The estimated construction equipment, schedule and average employee count is as follows:

Off-Road Equipment:

- Two scrapers
- One Grader
- Two Compactors/Rollers
- One Dozer
- One Excavator

Schedule:

- Site Preparation and Grading – 20 Days
- Compost Pad Construction – 30 Days
- Equipment Areas Pad Construction – 30 Days
- Equipment Installation/Commissioning – 60 Days
- Construction Activities – 5 days/week and 10 hours/day

Employees:

- 9 Equipment Operators
- 5-10 Laborers

All equipment was assumed to be in use for the proposed project specified hours per day and load SJVAPCD's required measures for all project include: (1) water exposed area three times per day; and (2) reduce vehicle speed to less than 15 miles per hour.

Long-term Emissions (Operations)

Long-term emissions are caused by operational mobile, area, and stationary sources. Long-term emissions would consist of the following components.

Fugitive Dust Emissions

The main source of PM₁₀ emissions would be from unpaved travel associated with equipment at the project site.

PM₁₀ on its own as well as in combination with other pollutants creates a health hazard. The SJVAPCD's Regulation VIII establishes required controls to reduce and minimizing fugitive dust emissions. The following SJVAPCD Rules and Regulations apply to the proposed project (and all projects):

- Rule 2010 - Authority to Construct and Permit to Operate
- Rule 2020 – Exemptions
- Rule 2201 - New and Modified Stationary Source Review
- Rule 2520 – Federally Mandated Operating Permits
- Rules 3010–3901 – Fees
- Rules 4001–4905 – Prohibitions
- Rule 4102 – Nuisance
- Rule 4565 – Biosolids, Animal Manure, and Poultry Litter Operations
- Rule 4566 - Organic Material Composting Operations
- Regulation VIII – Fugitive PM₁₀ Prohibitions
- Rule 8011 - General Requirements
- Rule 8021 – Dust Control Plan
- Rule 8031 – Bulk Materials
- Rule 8041 - Carryout and Trackout
- Rule 8051 - Open Areas
- Rule 8061 – Paved and Unpaved Roads
- Rule 8071 – Unpaved Vehicle/Equipment Traffic Areas

Exhaust Emissions

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

Stationary Source Emissions

Stationary source emissions from the project would consist of VOC, PM₁₀ and PM_{2.5} emissions released to the atmosphere from the composting process. The facility currently has SJVAPCD Permits to Operate covering pre-project stationary source operations. As part of the planned modification, applications will be submitted to the SJVAPCD to modify the existing permits and to permit any additional equipment required under the modification plans.

Health Risk Analysis

A Health Risk Assessment (HRA) estimates potential acute, chronic, and carcinogenic health risks from a project. To predict the potential health risk to the population attributable to emissions of HAPs from the proposed Project, ambient air concentrations were predicted with dispersion modeling to arrive at a conservative estimate of increased individual carcinogenic risk that might occur as a result of continuous exposure over a 70-year lifetime. Similarly, predicted concentrations were used to calculate non-cancer chronic and acute hazard indices (HIs), which are the ratio of expected exposure to acceptable exposure. The basis for evaluating potential health risk is the identification of sources with increased HAPs. Potential HAPs associated with the Project are diesel particulate matter from off-road equipment and on-road vehicles and fugitive emissions from the composting activities.

Health risk is determined using the Hotspots Analysis and Reporting Program (HARP2) software distributed by the CARB; HARP2 requires peak 1-hour emission rates and annual-averaged emission rates for all pollutants for each modeling source. Assumptions used to calculate the emission rates for the proposed Project are outlined below.

The most recent version of EPA's AMS/EPA Regulatory Model - AERMOD (recompiled for the Lakes ISC-AERMOD View 9.4.0 interface) was used to predict the dispersion of emissions from the proposed Project (Lakes Environmental Software 2017). The analysis employed all of the regulatory default AERMOD model keyword parameters, including elevated terrain options.

Since the incremental emissions from diesel particulate matter (DPM) will decrease over time, they were not modeled in this analysis. HAPs emitted from composting were estimated as a fraction of VOCs from the composting using a greenwaste compost speciation profile from SJVAPCD. In addition ammonia emissions from composting were also evaluated in this HRA. HAPs emitted from material handling of compost were estimated as a fraction of PM₁₀ emissions from material handling operations using a greenwaste compost dust speciation profile from SJVAP.

Discrete receptors were placed on houses, businesses and potential agricultural workers within close proximity of the Project site. A total of 59 discrete off-site receptors were analyzed. Per SJVAPCD policy, elevated terrain options were employed even though there is not complex terrain in the Project area.

SJVAPCD-provided, AERMET UStar processed meteorological datasets for the Bakersfield monitoring station, calendar years 2010 through 2014 was input to AERMOD (SJVAPCD 2018b). This was the most recent available dataset available at the time the modeling was conducted. Rural dispersion parameters were used because the operation and the majority of the land surrounding the facility is considered "rural" under the Auer land use classification method.

Plot files generated by AERMOD were imported to HARP CONVERSION software HARP CONVERSION was used to adjust the AERMOD-predicted air concentrations calculated with unit emission rates to pollutant-specific emission rates and to generate source, X/Q and emission import files for HARP.

The files generated in HARP CONVERSION were then uploaded into the HARP to HARP 2 Converter then to the Air Dispersion Modeling and Risk Assessment Tool (ADMRT) program in the Hotspots Analysis and Reporting Program Version 2 (HARP 2). ADMRT post-processing was used to assess the potential for excess cancer risk and chronic non-cancer effects using the most recent health effects data from the California EPA Office of Environmental Health Hazard Assessment (OEHHA).

HARP post-processing was used to assess the potential for excess chronic non-cancer effects and cancer risk using the most recent health effects data from the California EPA Office of Environmental Health Hazard Assessment (OEHHA). HARP2 site parameters were set for the mandatory minimum pathways. Risk reports were generated using the derived OEHHA analysis method for carcinogenic risk and non-carcinogenic chronic and acute risk. Site parameters are included in the HARP2 output files included in Appendix B. Total cancer risk was predicted at each receptor. A hazard index was computed for chronic and acute non-cancer health effects for each applicable endpoint and each receptor. SJVAPCD has set the level of significance for carcinogenic risk at twenty in one million, which is understood as the possibility of causing twenty additional cancer cases in a population of one million people. The level of significance for chronic non-cancer risk is a hazard index of 1.0.

Ambient Air Quality Analysis

An ambient air quality analysis, when required, determines if the proposed project has the potential to cause a violation of the ambient air quality standards or a substantial contribution to an existing or projected air quality standard. As demonstrated in Impact 4.3-2, the Project's potential increase to any criteria pollutants is negligible and would not be anticipated to cause an exceedance of any ambient air quality thresholds; therefore, an ambient air quality analysis was not required.

CO Hotspots

Heavy traffic congestion can contribute to high levels of CO. Individuals exposed to these CO "hot-spots" may have a greater likelihood of developing adverse health effects. The potential for the

project to result in localized CO impacts at intersections resulting from addition of its traffic volumes is assessed based on Kern County's suggested criteria, which recommends performing a localized CO impact analysis for intersections operating at or below level of service (LOS) E.

Visibility Impacts

Kern County guidance states that potential impacts to visibility should be evaluated for all industrial projects and any other projects, such as mining projects, that have components that could generate dust or emissions related to visibility.

Based on the Kern County guidelines, a visibility analysis was completed since the project is a large industrial stationary-source, and it may have long-term operational components that could generate substantial dust or emission plumes related to visibility.

Valley Fever Exposure

While there are no specific thresholds for the evaluation of potential Valley Fever exposure, the potential for Valley Fever exposure as a result of the project is evaluated based on the anticipated earth-moving activities, and considers applicant-proposed measures and compliance with Rule 8021, Section 6.3, which requires development and implementation of a dust control plan to help control the release of the *Coccidioides immitis* fungus during construction activities.

Asbestos

There are no quantitative thresholds related to receptor exposure to asbestos.

COVID-19

There are no definitive quantitative thresholds related to receptor exposure to COVID-19 and the relationship of exposure to PM_{2.5}.

Thresholds of Significance

In accordance with the State CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. The following significance thresholds related to air quality have been derived from Appendix G of the State CEQA Guidelines:

- Conflict with or obstruct implementation of any applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.

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

The Kern County Planning and Natural Resources Department's *Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports* are intended to assist with the preparation of the air quality assessments that serve as technical documents in EIRs prepared by the Department. The *Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports* requires construction and operational emissions comparisons with the adopted Kern County CEQA Environmental Checklist thresholds and the SJVAPCD thresholds, provided in **Table 4.3-5, Air Quality Thresholds of Significance – Criteria Pollutants**.

The SJVAPCD has adopted guidelines for implementing CEQA. Those guidelines contain air quality significance criteria that are applied during CEQA review of projects for which SJVAPCD is the lead agency. However, Kern County is the CEQA lead agency for the proposed project and will make the determination as to whether or not the proposed project may have a significant effect on the environment. Kern County's determination will take into consideration SJVAPCD's criteria but will ultimately be based upon the thresholds adopted by Kern County.

The Kern County CEQA Implementation Document and Kern County Environmental Checklist state that a project would have a significant impact on air quality if it would:

- 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 nonattainment under an applicable federal or state ambient air quality standard. Specifically, would implementation of the project (in a specific location) exceed any of the following adopted thresholds:
 - i. SJVAPCD
 - Operational and Area Sources:
 - ROG: 10 tons per year
 - NOx: 10 tons per year
 - PM₁₀: 15 tons per year
 - Stationary Sources as Determined by District Rules
 - Severe Nonattainment: 25 tons per year
 - Extreme Nonattainment: 10 tons per year
 - c. Expose sensitive receptors to substantial pollutant concentrations; or
 - d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

San Joaquin Valley Air Pollution Control District

The SJVAPCD adopted thresholds of significance in the 2015 GAMAQI (SJVAPCD 2015a). Section 8.4.2 of the GAMAQI provides that project-related impacts on air quality may be significant when on-site emission increases from construction activities or operational activities exceed the 100 pounds per day screening level of any criteria pollutant after implementation of all enforceable mitigation measures. Under such circumstances, the SJVAPCD recommends that an AAQA be performed to determine if emission increases from a project will cause or contribute to a violation of the ambient air quality standards based on the significance thresholds as follows:

- Construction and Operational (permitted and non-permitted equipment and activities) Emissions;
 - 10 tons per year for ROG
 - 10 tons per year for NO_x
 - 100 tons per year for CO
 - 27 tons per year for SO_x
 - 15 tons per year for PM₁₀
 - 15 tons per year for PM_{2.5}

The SJVAPCD 2015 GAMAQI provides thresholds for analysis of health risk impacts from project operation, both permitted and non-permitted sources combined. The following are the significance thresholds for TACs:

- Carcinogens: Maximally exposed individual risk equals or exceeds 20 in one million
- Non-Carcinogens, Acute: Hazard Index equals or exceeds 1 for the maximally exposed individual
- Non-Carcinogens, Chronic: Hazard Index equals or exceeds 1 for the maximally exposed individual

Project Impacts and Mitigation Measures

Impact 4.3-1: The project would conflict with or obstruct implementation of applicable air quality plans.

Air quality impacts from proposed projects within the San Joaquin Valley Air Basin portion of Kern County are controlled through policies and provisions of the SJVAPCD, Kern County General Plan, and SKICSP. Each project should also demonstrate consistency with the SJVAPCD's adopted Air Quality Attainment Plans (AQAP) for ozone and PM₁₀. The SJVAPCD is required to submit a "Rate of Progress" document to the CARB that demonstrates past and planned progress toward reaching attainment for all criteria pollutants. The CCAA requires air pollution control districts with severe or extreme air quality problems to provide for a five percent reduction in nonattainment emissions per year. The AQAP prepared for the San Joaquin Valley by the SJVAPCD complies with this requirement. The CARB reviews, approves, or amends the document and forwards the plan to the USEPA for final review and approval within the SIP.

Air pollution sources associated with stationary sources are regulated through the permitting authority of the SJVAPCD under the “New and Modified Stationary Source” rule (SJVAPCD Rule 2201, 1992). Owners of any new or modified equipment that emits, reduces, or controls air contaminants, except those specifically exempted by the SJVAPCD, are required to apply for an Authority to Construct and Permit to Operate (SJVAPCD Rule 2010, 1992). Additionally, best available control technology (BACT) is required on specific types of stationary equipment and are required to offset both stationary source emission increases along with increases in cargo carrier emissions if the specified threshold levels are exceeded (SJVAPCD Rule 2201, 4.7.1, 1992). Through this mechanism, the SJVAPCD ensures that all stationary sources within the proposed project area would be subject to the standards of the SJVAPCD and that new developments do not result in net increases in stationary sources of criteria air pollutants.

The Synagro facility currently has SJVAPCD Permits to Operate covering pre-project stationary source operations. As part of the planned modification, applications will be submitted to the SJVAPCD to modify the existing permits and to permit any additional equipment required under the modification plans. These permit changes and additions will allow facility expansion as described in the Project Description and will retain full compliance with all SJVAPCD Rules and Regulations as well as with state and federal requirements. With implementation of Mitigation Measures **MM 4.3-1** through **MM 4.3-3** the proposed project would not conflict with the SJVAPCD air quality plans.

Required Evaluation Guidelines

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

1. **Determination that an AQAP is being implemented in the area where the project is being proposed.** The SJVAPCD has implemented the current, modified, AQAP as approved by the CARB. The current AQAP is under review by the USEPA.
2. **The proposed project must be consistent with the growth assumptions of the applicable AQAP.** The Kern COG growth modelling for the 2018 RTP/SCS provides for future employment/population factors. The project would not introduce land uses that would generate vehicle trips or promote growth in the project area beyond what is projected in the *Kern County General Plan*.
3. **The project must contain in its design all reasonably available and feasible air quality control measures.** The proposed project incorporates various policy and rule-required implementation measures that will reduce related emissions.

The CCAA and AQAP identify transportation control measures as methods to further reduce emissions from mobile sources. Strategies identified to reduce vehicular emissions such as reductions in vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, and traffic congestion, in order to reduce vehicular emissions, can be implemented as control measures under the CCAA

as well. Additional measures may also be implemented through the building process such as providing electrical outlets on exterior walls of structures to encourage use of electrical landscape maintenance equipment or measures such as electrical outlets for electrical systems on diesel trucks to reduce or eliminate idling time.

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

- a. The findings of the analysis show that the project's no employment increases are planned for the project area; and

That, by definition, the proposed emissions from the project are below the SJVAPCD's established emissions impact thresholds.

Based on these factors, the proposed project is consistent with the AQAP.

Consistency with Kern Council of Government's Regional Conformity Analysis

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

The Kern COG Regional Conformity Analysis considers General Plan Amendments (GPA) and zone changes that were enacted at the time of the analysis as projected growth within the area based on land use designations incorporated within the Kern County General Plan. Land use designations that are altered based on subsequent GPAs that were not included in the Regional Conformity Analysis were not incorporated into the Kern COG analysis. Consequently, if a proposed project is not included in the regional growth forecast using the latest planning assumptions, it may not be said to conform to the regional growth forecast. As described in **Chapter 3, Project Description**, the land use designation for the project site is 3.4/2.5 (Solid Waste Facility/Flood Hazard).

Under current policies, only after a GPA is approved, can housing and employment assumptions be updated to reflect the capacity changes. Regarding use of the SKICSP, the area was entirely designated for heavy industrial activities such as those within the M-3 Zone in the Kern County Zoning Ordinance. Since the proposed development does not require a GPA and zone change and because the project is consistent with the SKICSP and intent of the zoning ordinance, the site is being used for the intended use and the existing growth forecast would not be modified to reflect such changes. In order to determine whether the forecasted growth for the project area is sufficient to account for the projected increases in employment, an analysis based on Kern COG regional forecast was conducted. Since no employment increase is proposed, the forecast for the analysis area would be sufficient for the proposed project and impacts would be less than significant.

With implementation of Mitigation Measures **MM 4.3-5** through **MM 4.3-7** the proposed project would not conflict with any adopted air quality plans.

Mitigation Measures

MM 4.3-1 The project is required to comply with applicable state and federal air pollution control laws and regulations, and with applicable rules and regulations of the San Joaquin Valley Air Pollution Control District during construction and operations, including obtaining the required permit for the modified facility.

MM 4.3-2 Prior to issuance of a grading permit, the project proponent shall submit a Fugitive Dust Control Plan to the SJVAPCD for review and approval. The Fugitive Dust Control Plan shall reduce PM₁₀ and PM_{2.5} emissions during construction. The Fugitive Dust Control Plan shall include:

- a. Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submission, and implementation of the plan.
- b. Description and location of operation(s).
- c. Listing of all fugitive dust emissions sources included in the operation.
- d. All measures (in addition to those measures required by the SJVAPCD) being undertaken during construction activities and operational activities to ensure fugitive dust being blown off-site is minimized. Measures may include, but are not limited to:
 1. Use of water trucks as required for the expected level of winds in the area.
 2. Use of dust suppressant (i.e., soil binders or mulch).
 3. Construction of dust screening in appropriate locations around the project site (i.e., fence slats or mesh screening).
 4. A copy of the approved Site-Specific Dust Control Plan shall be kept at the on-site construction office, and all measures included in the Site-Specific Dust Control Plan shall be included on all Grading Plans issued for the project by the Kern County Public Works Department.

MM 4.3-3 The project proponent shall ensure construction of the project shall be conducted in compliance with all applicable rules and regulations set forth by the SJVAPCD. Dust control measures outlined below shall be implemented where they are applicable and feasible. The list shall not be considered all-inclusive and any other measures to reduce fugitive dust emissions may be required by appropriate agencies to respond to urgent issues on-site:

- a. The following dust control measures shall be implemented:

1. All soil being actively excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soil areas. Watering shall take place a minimum of three times daily on disturbed soil areas with active operations, unless dust is otherwise controlled by rainfall or use of a dust suppressant.
2. After active construction activities, soil shall be stabilized with a non-toxic soil stabilizer or soil weighting agent, or alternative approved soil-stabilizing methods.
3. All unpaved construction and operation/maintenance site roads, as they are being constructed, shall be stabilized with a non-toxic soil stabilizer or soil weighting agent.
4. All clearing, grading, earth-moving, and excavation activities shall cease during periods of winds greater than 20 mph (averaged over 1 hour), or when dust plumes of 20% or greater opacity impact public roads, occupied structures, or neighboring property or as identified in a plan approved by the SJVAPCD.
5. All trucks entering or leaving the site will cover all loads of soils, sands, and other loose materials, or be thoroughly wetted with a minimum freeboard height of 6 inches.
6. Areas disturbed by clearing, earth-moving, or excavation activities shall be minimized at all times.
7. Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust.
8. All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered or shall be treated with appropriate dust suppressant compounds.
9. Prior to construction, wind breaks (such as chain-link fencing including a wind barrier) shall be installed where appropriate.
10. Where acceptable to the Kern County Fire Department, weed control shall be accomplished by mowing instead of disking, thereby, leaving the ground undisturbed and with a mulch covering.
11. The project operator shall use the Global Positioning System (GPS) or lasers to level posts, generally avoiding grading except when elevation changes exceed design requirements.
12. When grading is unavoidable, it is to be phased and done with the application of approved chemical dust palliatives that stabilize the earth.

13. Where ground is cleared, plant roots must be left in place where possible to stabilize the soil.
 14. Disturbed areas shall be revegetated as soon as possible after disturbance if area is no longer needed for mining or landfill activities.
- b. After active clearing, grading, and earth-moving activities are completed within any portion of the site, the following dust control practices shall be implemented:
1. Dust suppressant should be used on the same day or day immediately following the cessation of activity for a particular area where further activity is not planned.
 2. All internal unpaved road areas shall be treated with a dust suppressant or graveled to prevent excessive dust.
 3. The project operator shall use dust suppression measures during road surface preparation activities, including grading and compaction.
 4. Final road surfaces must be stabilized to achieve a measurable threshold friction velocity (TFV) equal to or greater than 100 centimeters per second.
 5. Wind barrier fencing or screening shall be installed, when appropriate.
- c. During all phases of construction, the following vehicular control measures shall be implemented:
1. On-site vehicle speed shall be limited to 10 mph on unpaved areas within the project site. Vehicles may travel up to 25 mph on stabilized unpaved roads (application of palliatives, gravel, etc. that reduces the erosion potential of the soil) as long as such speeds do not create visible dust emissions.
 2. Visible speed limit signs shall be posted at main ingress point(s) on site.
 3. All areas with vehicle traffic, such as the main entrance roadway to the project site, shall be graveled or treated with dust palliatives so as to prevent track-out onto public roadways.
 4. All vehicles that are used to transport solid bulk material on public roadways and that have potential to cause visible emissions shall be provided with a cover, or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least one foot of freeboard.
 5. Streets adjacent to the project site shall be kept clean, and project-related accumulated silt shall be removed a minimum of once daily, or as necessary

to prevent substantial off-site fugitive dust releases. The use of either dry rotary brushes (unless prior wetting) or blower devices is prohibited.

6. Access to the site shall be by means of an apron into the project site from adjoining surfaced roadways. The apron shall be surfaced or treated with dust suppressants. If site soils cling to the wheels of the vehicles, then a grizzly, wheel-washer, or other such device shall be used on the road exiting the project site, immediately prior to the pavement, to remove most of the soil material from vehicle tires.

MM 4.3-4 Prior to the issuance of grading or building permits, where required, the project proponent shall provide a comprehensive Phased Grading Plan for review by the Kern County Planning and Natural Resources Department to reduce fugitive dust emissions resulting from wind erosion at the site. The Phased Grading Plan shall:

- a. Identify a comprehensive grading schedule for the entire project site that demonstrates the following:
 1. The extent of grading shall be minimized to the extent feasible to limit the removal of topsoil and creation of loose soils. Only in areas where drainage improvements, structural foundations (e.g. inverter/ transformer pads), service roads, and leveling of severe grades need to occur will grading that removes and recompacts the soil surface occur. Dust palliatives and water shall be immediately applied following any grading.
 2. Application of dust palliatives shall be applied on an as-needed basis throughout project construction to help reduce dust, especially during periods of high winds, and shall include use of: (1) an eco-safe, biodegradable, liquid copolymer shall be used to stabilize and solidify any soil; and (2) a hydro mulch mixture composed of wood fiber mulch and an Environ-Mend binder may also be applied, where real-time weather conditions dictate that additional measures are necessary.
 3. Water trucks shall transit across the project site and construction access roads to suppress the fugitive dust from disturbed soils on roads and active working areas on a regular and as-needed basis.
- b. Identify, in addition to those measures required by the SJVAPCD, all measures being undertaken during construction activities and operational activities to ensure dust being blown off-site is minimized. Measures may include, but are not limited to:
 1. Increased use of water and/or use of dust suppressant.
 2. Pre-seeding and/or use of wood chips as permitted by the SJVAPCD.
 3. Construction of dust screening around the project site.

MM 4.3-5 The project proponent and/or its contractors shall implement the following measures during construction of the project:

- a. All equipment shall be maintained in accordance with the manufacture's specifications.
- b. Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than ten minutes.
- c. No individual piece of construction equipment shall operate longer than 8 consecutive hours per day.
- d. Electric equipment shall be used whenever possible in lieu of diesel or gasoline-powered equipment.
- e. All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NOx emissions.
- f. On-road and off-road diesel equipment shall use diesel particulate filters (or the equivalent) if permitted under manufacturer's guidelines.
- g. Prohibit the use of heavy equipment during first- or second-stage smog alerts and suspend all construction activities during second-stage smog alerts.
- h. Utilize existing power sources (i.e., power poles) when available. This measure would minimize the use of higher polluting gas or diesel generators.
- i. Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use to the extent feasible.
- j. Require that trucks and vehicles in loading or unloading queues have their engines turned-off when not in use, where feasible.
- k. Off-road equipment engines over 50 horsepower shall be Tier 3 certified or higher (unless Tier 3 equipment, has been determined to not be available).
- l. Provide notification to trucks and vehicles in loading or unloading queues that their engines shall be turned-off when not in use for more than 10 minutes.

MM 4.3-6 This is an existing Composting Facility that has been permitted and operating since 2006. Prior to issuance of any SJVAPCD-required Authorities to Construct or Permits to Operate for the proposed modifications, the project proponent shall confirm that it has previously surrendered sufficient ERCs to reduce VOC emissions in accordance with SJVAPCD requirements, and if necessary purchase additional ERCs for the project.

MM 4.3-7 The project proponent shall enter into a Developer Mitigation Contract with the San Joaquin Valley Air Pollution Control District to reduce emissions of reactive organic gases, nitrogen oxide, and particulate matter (PM10 and PM2.5) to ensure that all project-related construction and operational emissions within the San Joaquin Valley Air Basin are fully offset (i.e., no net increase). Emission reductions may be achieved by use of newer, low-emission equipment, implementation of on-site or off-site mitigation, and/or the funding of off-site

mitigation, through participation in the San Joaquin Valley Air Pollution Control District's off-site mitigation program.

The Developer Mitigation Contract shall be reviewed and approved by the San Joaquin Valley Air Pollution Control District prior to issuance of construction/grading permits by Kern County. The project proponent/owner shall submit to the Kern County Planning and Natural Resources Department documentation confirming compliance with the Developer Mitigation Contract, prior to issuance of final discretionary approval (e.g., approval of the grading permit). The project proponent shall report annually through the Mitigation Monitoring and Reporting program in compliance with the Developer Mitigation Contract.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.3-1** through **MM 4.3-7**, impacts would be less than significant.

Impact 4.3-2: The project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment under an applicable federal or state ambient air quality standard.

Short-Term (Construction) Emissions

Short-term emissions are primarily from the construction phase of a project, and would have temporary impacts on air quality.

The project applicant provided a list of specific construction equipment and a timeline, which were used to estimate the construction emissions should the composting facilities be extended into the area already permitted under the existing CUP. Applying project applicant assumptions and model defaults, construction emissions were projected based on the estimated construction schedule. The estimated construction equipment, schedule and average employee count are identified in the Methodology discussion, above.

In order to be conservative it was assumed all pieces of equipment would operate and there would be 19 construction workers present every day of the construction period. Additionally, it was assumed all construction would occur in 2019. If the total construction time is accurate, all estimated emission totals are believed to be conservative and reasonable and present a legally sufficient estimate of potential impacts to air quality.

SJVAPCD's required mitigation measures for all projects were also applied:

- Water exposed areas 3 times per day; and
- Reduce vehicle speeds to less than 15 miles per hour.

Table 4.3-6, *Short-Term Project Emissions* presents the project's short-term emissions based on the anticipated construction period.

Table 4.3-6: Short-Term Project Emissions

Emissions Source	Pollutant (tons/year)					
	RO G	NO x	CO	SO ₂	PM ₁₀	PM _{2.5}
Unmitigated Emissions						
Construction Emissions	0.40	4.54	2.63	0.01	0.39	0.24
Mitigated Emissions						
Construction Emissions	0.40	4.54	2.63	0.01	0.28	0.21
Significance Threshold						
	10	10	100	27	15	15
Is Threshold Exceeded For a Single Year After Mitigation?	No	No	No	No	No	No
Note: 0.00 may represent <0.005						
Source: Insight Environmental Consultants, 2020.						

As calculated with CalEEMod, the estimated short-term construction-related emissions would not exceed SJVAPCD significance threshold levels during a given year and would therefore be less than significant.

Long-Term (Operational) Impacts

Long-term emissions are caused by operational mobile, area, and stationary sources. Long-term emissions would consist of the following components.

Fugitive Dust Emissions

Operation of the project site at full operation would not be expected to present a substantial source of fugitive dust (PM₁₀) emissions. The main source of PM₁₀ emissions would be from unpaved travel associated with equipment at the project site.

PM₁₀ on its own as well as in combination with other pollutants creates a health hazard. The SJVAPCD's Regulation VIII establishes required controls to reduce and minimizing fugitive dust emissions. The following SJVAPCD Rules and Regulations apply to the proposed project (and all projects):

- Rule 2010 - Authority to Construct and Permit to Operate
- Rule 2020 – Exemptions
- Rule 2201 - New and Modified Stationary Source Review
- Rule 2520 – Federally Mandated Operating Permits
- Rules 3010–3901 – Fees
- Rules 4001–4905 – Prohibitions

- Rule 4102 – Nuisance
- Rule 4565 – Biosolids, Animal Manure, and Poultry Litter Operations
- Rule 4566 - Organic Material Composting Operations
- Regulation VIII – Fugitive PM₁₀ Prohibitions
- Rule 8011 - General Requirements
- Rule 8021 – Dust Control Plan
- Rule 8031 – Bulk Materials
- Rule 8041 - Carryout and Trackout
- Rule 8051 - Open Areas
- Rule 8061 – Paved and Unpaved Roads
- Rule 8071 – Unpaved Vehicle/Equipment Traffic Areas

The project would comply with applicable SJVAPCD rules and regulations and the Kern County Zoning Ordinance that reduce fugitive dust emissions.

Exhaust Emissions

Project-related transportation activities from employees and delivery trucks would generate mobile source ROG, NO_x, SO_x, CO, PM₁₀ and PM_{2.5} exhaust emissions. Exhaust emissions would vary substantially from day to day but would average out over the course of an operational year. The variables factored into estimating total project emissions include: level of activity, site characteristics, weather conditions, and number of employees. As the project is not expected to generate an adverse change in current activity levels, substantial emissions are not anticipated.

Stationary Source Emissions

Permitted stationary source emissions are not anticipated to change as a result of the proposed project. However, baseline emissions and post-project (current permit levels) emissions were estimated. Stationary source emissions from the project would consist of VOC, PM₁₀ and PM_{2.5} emissions released to the atmosphere from the composting process.

Projected Emissions

The proposed project is not expected to have long-term air quality impacts as shown in **Table 4.3-7, Post-Project (Operational) Non-Stationary Source Emissions** and **Table 4.3-8, Post-Project (Operational) Stationary Source Emissions**.

Table 4.3-7: Post-Project (Operational) Non-Stationary Source Emissions

Emissions Source	Pollutant (tons/year)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Baseline Emissions (10 Year Avg. 2008 – 2017)	4.67	54.81	20.02	0.068	7.48	2.94
Post-Project Unmitigated Emissions	2.24	30.51	12.16	0.064	5.99	1.52
Project Incremental Emissions	-2.43	-24.30	-7.85	-0.004	-1.49	-1.41
SJVAPCD Threshold	10	10	100	27	15	15
Is Threshold Exceeded After Mitigation?	NO	NO	NO	NO	NO	NO

Source: Insight Environmental Consultants, 2020.

As shown in **Table 4.3-7, Post Project (Operational) Non-Stationary Source Emissions** operations-related non-stationary source emissions would decrease compared to baseline emissions primarily due to the reduction in fleet average emission factors due to cleaner vehicles in the post-project period compared to the baseline period. The project also proposes the potential to mitigate non-stationary sources further by phasing in compressed natural gas (CNG) fueled delivery trucks in the future. However, CNG fueled delivery trucks were not analyzed as part of this analysis. Since the project's incremental emissions would decrease, they would be less than the SJVAPCD significant threshold levels. Therefore, the proposed project would have a less than significant impact during project operations from non-stationary sources.

Table 4.3-8: Post-Project (Operational) Stationary Source Emissions

Emissions Source	Pollutant (tons/year)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Baseline Emissions (10 Year Avg. 2008 – 2017)	30.58	0.16	0.02	0.13	0.02	0.02
Post-Project Unmitigated Emissions	80.21	0.43	0.09	0.14	0.06	0.06
Project Incremental Increase (Unmitigated)	49.64	0.27	0.08	0.01	0.04	0.04
Mitigation (ERC Credits)	-49.64	-	-	-	-	-
Project Incremental Increase (Mitigated)	0.00	0.27	0.08	0.01	0.04	0.04
SJVAPCD Threshold	10	10	100	27	15	15
Is Threshold Exceeded After Mitigation?	NO	NO	NO	NO	NO	NO

Source: Insight Environmental Consultants, 2020.

As shown in **Table 4.3-8, Post Project (Operational) Stationary Source Emissions** operations-related stationary source emissions would be greater than the SJVAPCD significance threshold levels for ROG emissions prior to mitigation. However, ROG emissions were mitigated through the surrender of emission reduction credits (ERCs). Since the project is not proposing any changes to permitted tons processed there would not be any increase in permitted emissions, consequently, the post-project stationary source emissions are equal to the currently permitted emissions. Therefore, the incremental ROG emissions increase from stationary sources has already been mitigated through the permitting process by fully surrendered ERCs S-2114-1, N-442-1, and N-4223-1 and partially surrendered S-2792-1 for a total of 105.33 tons (credit for 70.22 tons with distance offset ratio applied) of ROG emissions during the permitting process for the project's facility. Therefore, the proposed project would have a less than significant impact during project operations from stationary sources.

Ambient Air Quality

An ambient air quality analysis, when required, determines if the proposed project has the potential to cause a violation of the ambient air quality standards or a substantial contribution to an existing or projected air quality standard. As discussed above, the project's potential increase to any criteria pollutants is negligible and would not be anticipated to cause an exceedance of any ambient air quality thresholds; therefore, an ambient air quality analysis was not required. Thus, the project's contribution to potential violations of ambient air quality standards would be less than significant.

As identified above, the project-related short short-term and long-term emissions would not violate any air quality standard as adopted or established by USEPA or air district or contribute substantially to an existing or projected air quality violation. Impacts would be less than significant and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Impact 4.3-3: The project would expose sensitive receptors to substantial pollutant concentrations.

The primary pollutants of concern to human health generated by the proposed project are criteria pollutants and TACs.

Toxic Air Pollutants

The proposed project would result in the emissions of TACs. Emissions from diesel and gasoline combustion during construction and operation activities associated with the composting facility would emit TACs, including PM₁₀, PM_{2.5}, and VOCs. However, since the incremental emissions of these TACs from diesel particulate matter (DPM) will decrease over time, they were not modeled in the project HRA. TAC emissions would also be emitted from fugitive dust generated during construction and operation activities associated with the composting facility. Operation of the composting facility would also emit VOCs and ammonia as a byproduct of organic decomposition.

The SJVAPCD has set thresholds of significance for TAC emissions from operations of permitted and non-permitted sources noting that, from a health risk perspective, two types of land use projects have the potential to cause long-term public health risk impacts listed below. The proposed project would be a Type A project:

- Type A Projects: Land use projects that will place new toxic sources in the vicinity of existing receptors, and
- Type B Projects: Land use projects that will place new receptors in the vicinity of existing toxics sources" (SJVAPCD 2015).

Table 4.3-9, Measures of Significance – Toxic Air Contaminants, shows the thresholds uses by SJVAPCD when determining when evaluating hazardous air pollutants and receptors that could be affected.

Table 4.3-9: Measure of Significance – Toxic Air Contaminants		
Agency	Level	Description
Significance Thresholds Adopted for evaluation of Impacts Under CEQA		
SJVAPCD	Carcinogens	Maximally exposed individual risk equals or exceeds 20 in one million
	Non-Carcinogens	Acute: Hazard index equals or exceeds 1 for the maximally exposed individuals
		Chronic: Hazard index equals or exceeds 1 for the maximally exposed individuals.

Source: SJVAPCD 2020

There are no sensitive receptors (i.e. young children, chronically ill individuals, the elderly, schools, hospitals, or locations such as nursing homes, daycare centers, etc.), within immediate proximity of the project and that may be affected by TACs emitted by the project. The project site is surrounded by agricultural uses, solar facilities, and petroleum distribution facilities. While there are scattered agricultural residences in the larger surrounding area, the closest residential unit is approximately 1.55 miles to the north. This residential property is the nearest sensitive receptor. There are no known non-residential sensitive receptors within 2 miles of the Project site. As such, impacts to sensitive receptors are expected to be negligible and are considered less than significant.

Criteria Pollutants

Sierra Club vs. County of Fresno (December 24, 2018)

In *Sierra Club v. County of Fresno* (S219783) (*Sierra Club*) the Supreme Court held that CEQA requires EIRs to either: (1) make a “reasonable effort” to substantively connect the estimated amount of a given air pollutant a project will produce and the health effects associated with that pollutant, or (2) explain why such an analysis is infeasible (6 Cal.5th at 1165–66). However, the Court also clarified that that CEQA “does not mandate” that EIRs include “an in-depth risk assessment” that provides “a detailed comprehensive analysis . . . to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations and to assess and quantify both the individual and population wide health risks associated with those levels of exposure” (id. at 1665). However, correlating the project’s criteria air pollutant to specific health impacts, particularly with respect to O₃, is not possible because there is no feasible or established scientific method to perform such analysis. This conclusion is supported by both the SJVAPCD and the South Coast Air Quality Management District (SCAQMD), who have determined that this type of analysis is speculative and infeasible and there are no unique issues for the SJVAPCD that would make this analysis invalid.

Writing as amicus curiae in *Sierra Club*, the SJVAPCD explained that “[t]he health impact of a particular criteria pollutant is analyzed on a regional and not a facility level based on how close the area is to complying with (attaining) the NAAQS. Accordingly, while the type of individual facility/health impact analysis that the Court of Appeal has required is a customary practice for TACs, it is not feasible to conduct a similar analysis for criteria air pollutants because currently

available computer modeling tools are not equipped for this task” (San Joaquin Valley Unified Air Pollution Control District [SJVUAPCD] 2015).

Instead, the SJVAPCD explained that it assesses a project’s potential to exceed NAAQS by evaluating the project’s compliance with district thresholds of significance, which are measured in mass emissions (SJVUAPCD 2015). As explained by SJVAPCD, its thresholds are based on factual, scientific data and have been set at a level that ensures that NAAQS will not be exceeded, taking into consideration all cumulative emission sources (SJVUAPCD 2015). The SJVAPCD explained that attempting to connect criteria pollutant emissions to localized health impacts will “not yield reliable information because currently available modeling tools are not well suited for this task” (SJVUAPCD 2015). Available models are only equipped to model the impact of all emissions sources on an air basin-wide or regional basis, not on a project-level basis, and “[r]unning the photochemical grid model used for predicting ozone attainment with emissions solely from one project would thus not be likely to yield valid information given the relative scale involved” (SJVUAPCD 2015).

This inability to “accurately ascertain local increases in concentration” of mass emissions and then to further link emissions with health effects is particularly true for O₃ and its precursors—NO_x, ROG_s, and VOC_s; O₃ is not directly emitted into the air, but is instead formed as ozone precursors that undergo complex chemical reactions through sunlight exposure (SJVUAPCD 2015). Given the complex nature of this process, and the fact that O₃ can be transported by wind over long distances, “a specific tonnage amount of NO_x or VOC_s emitted in a particular area does not equate to a particular concentration of ozone in that area” (SJVUAPCD 2015). For this reason, the photochemical analysis for O₃ is done on a regional scale and it is inappropriate to analyze O₃ impacts at a local or project-level basis because a localized analysis would at most be speculative, and at worst be misleading. Speculative analysis is not required by CEQA (CEQA Guidelines Section 15145; *Laurel Heights Improvement Association v. Regents of the University of California* 1988).

The SJVAPCD also explained that the disconnect between the tonnage of precursor pollutants and the concentration of O₃ or particulate matter formed in a particular area is especially important to understand in considering potential health effects because it is the concentration, not the tonnage, that causes health effects (SJVUAPCD 2015). The SJVAPCD explained that even if a model were developed that could accurately assess local increases in concentrations of pollutants like O₃ and particulates, it would still be “impossible, using today’s models, to correlate that increase in concentration to a specific health impact” (SJVUAPCD 2015). The SJVAPCD stated that even a project with criteria pollutant emissions above its CEQA thresholds does not necessarily cause localized human health impacts as, even with relatively high levels of emissions, the SJVAPCD cannot determine “whether and to what extent emissions from an individual project directly impact human health in a particular area” (SJVUAPCD 2015). The SJVAPCD explained that this is particularly true for development projects like the proposed project, where most of the criteria pollutants are derived from mobile and area sources and not stationary sources. The SCAQMD also, as amicus curiae in *Sierra Club*, made similar points, reiterating that “an agency should not be required to perform analyses that do not produce reliable or meaningful results” (SCAQMD 2015). SCAQMD agrees that it is very difficult to quantify health impacts with regard to O₃, opining that the only possible means of successfully doing so is for a project so large that emissions would

essentially amount to all regional increases (SCAQMD 2015). With regard to particulate matter, the SCAQMD noted that while the CARB has created a methodology to predict expected mortality from large amounts of PM_{2.5}, the primary author of the methodology has reported that it “may yield unreliable results due to various uncertainties” and CARB staff has been directed by its governing board to reassess and improve it, which factor “also counsels against setting any hard-and-fast rule” about conducting this type of analysis (SCAQMD 2015). The amicus briefs filed by SJVAPCD and SCAQMD in *Sierra Club* are attached as part of Appendix C of this EIR.

Ambient Air Quality Standards

The USEPA and CARB have established NAAQS and CAAQS at levels above which concentrations could be harmful to human health and welfare, with an adequate margin of safety. Further, California air districts, like the SJVAPCD, have established emission-based thresholds that provide project-level estimates of criteria air pollutant quantities that air basins can accommodate without affecting the attainment dates for the NAAQS. An ambient air quality analysis, when required, determines if the proposed Project has the potential to cause a violation of the ambient air quality standards or a substantial contribution to an existing or projected air quality standard. Elevated levels of criteria air pollutants as a result of a project’s emissions could cause adverse health effects associated with these pollutants. As noted previously, the SJVAB is a nonattainment area for the State 1-hour O₃, 8-hour O₃, PM₁₀, and PM_{2.5} standards and is a nonattainment area for National 8-hour O₃ and PM_{2.5} standards. The potential for the project and generation of these local criteria pollutants and impacts to sensitive receptors is discussed immediately below.

Local Criteria Pollutants

Sensitive receptors are defined as locations where young children, chronically ill individuals, the elderly, or people who are more sensitive than the general population reside, such as schools, hospitals, nursing homes, and daycare centers. There are no known non-residential sensitive receptors within two miles of the project site. As discussed above, there are scattered agricultural residences in the surrounding area to the project site. These residential receptors represent the nearest sensitive receptors to the proposed project site with the closest approximately 1.55 miles to the north of the project.

The Project’s potential increase to any criteria pollutants is negligible and would not be anticipated to cause an exceedance of any ambient air quality thresholds. Because of this, an ambient air quality analysis was not required. Because the projects potential contribution would be minimal and because there are no sensitive receptors in close proximity to the project site, impacts to sensitive receptors in this regard and the project contribution to potential violations of ambient air quality standards would be less-than-significant.

Potential Impacts to Visibility to Nearby Class 1 Areas

Visibility impact analyses are intended for stationary sources of emissions which are subject to the Prevention of Significant Deterioration (PSD) requirements in 40 CFR Part 60; they are not usually conducted for area sources. Class 1 Areas are federal lands such as national parks, national wilderness areas, and national monuments. The nearest Class 1 Area to the project site would be the San Rafael Wilderness located approximately 33 miles to the southwest. Because the project’s

PM₁₀ emissions increase are predicted to be less than the PSD threshold levels, an impact at any Class 1 area within 100 kilometers of the project is extremely unlikely. Therefore, based on the project's predicted less-than significant PM₁₀ emissions, the project would be expected to have a less than significant impact to visibility at any Class 1 Area.

COVID-19

The project proposes changes to the composting and curing parameters used at the site to accommodate additional organic waste streams and meet the demands of the agricultural and horticultural markets that purchase the finished compost. Due to the open nature of the project site, blowing dust could occur and result in the dispersal of criteria air pollutants such as PM_{2.5} and potentially contribute to the transmission of respiratory diseases like COVID-19. While COVID-19 is thought to spread mainly through close contact from person-to-person, the CDC is still learning how the virus spreads and the severity of the illness it causes (CDC, 2020b). COVID-19 research and causality is still in the beginning stages. A nationwide study by Harvard University found a linkage between long term exposure to PM_{2.5} as air pollution and statistically significant increased risk of COVID-19 death in the United States (Harvard, 2020). While construction dust suppression measures would be implemented in Mitigation Measures **MM 4.3-1** through **4.3-7**, exposure to dust during construction could still occur which could increase the health susceptibility and increase the severity of the disease. In addition to implementation of Mitigation Measures **MM 4.3-1** through **MM 4.3-7**, the project would implement Mitigation Measure **MM 4.3-8**, which requires implementation of a COVID-19 Health and Safety Plan in accordance with the Kern County Public Health Services Department and Kern County Health Officer mandates.

Therefore, implementation of Mitigation Measures **MM 4.3-1** through **MM 4.3-8** would be required to reduce the project's regional and localized health effects associated with criteria air pollutants and COVID-19; however, the exact reduction from implementation of these mitigation measures cannot be quantified given existing scientific constraints.

CO Hot Spots Analysis

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

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

CO concentrations by 0.45 ppm or more. There are two criteria established by the SJVAPCD's GAMAQI by which CO "Hot Spot" modeling is required:

- A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity would be reduced to LOS E or F; or
- A traffic study indicates that the project would substantially worsen an already existing LOS F on one or more streets or at one or more intersections in the project vicinity.

As discussed in **Chapter 4.14, Transportation**, no adverse increase in vehicular traffic would result when compared to existing traffic levels and the project would not reduce any street or intersection to a LOS E or F and would not worsen any already existing LOS F of any street or intersection after mitigation. Therefore, CO "Hotspot" Modeling was not conducted for this project and no concentrated excessive CO emissions would be generated once the proposed project is completed. Thus, impacts would be less than significant and no mitigation is required.

Valley Fever

The project has the potential to generate fugitive dust and suspend Valley Fever spores with the dust that could then reach nearby sensitive receptors. It is possible that onsite workers could be exposed to valley fever as fugitive dust is generated during construction. The project would be required to comply with Rule 8021 Section 6.3, which requires applicants to develop, prepare, submit, obtain approval of, and implement a Dust Control Plan, which would reduce fugitive dust impacts to less than significant for all construction phases of the project, which would also control the release of the *Coccidioides immitis* fungus from construction activities. This requirement is included in Mitigation Measure **MM 4.3-2**; however, exposure to the *Coccidioides immitis* fungus would be potentially significant and Mitigation Measure **MM 4.3-9** is provided to further reduce impacts associated with Valley Fever and to protect on-site construction workers and nearby receptors. In addition, Mitigation Measure **MM 4.3-10** would be required and includes payment of a onetime fee for public awareness programs related to valley fever. Therefore, the exposure to Valley Fever would be minimized and impacts would be reduced to less-than-significant levels with implementation of the mitigation measures identified above.

Asbestos

Naturally occurring asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading of development projects, and at mining operations.

Serpentine and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties associated with the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. However, according to information provided by the Department of Conservation Division of Mines and Geology, the project site is not in an area likely to contain ultramafic rock or naturally occurring asbestos (California Department of Conservation,

2000). Therefore, impacts associated with exposure of construction workers and nearby sensitive receptors to asbestos would be less than significant.

Mitigation Measures

Implement Mitigation Measures **MM 4.3-1** through **MM 4.3-7**, and:

MM 4.3-8 At the time of project implementation, a COVID-19 Health and Safety Plan should be prepared in accordance with the Kern County Public Health Services Department and Kern County Health Officer mandates. A copy of the COVID-19 Health and Safety Plan shall be submitted to the Kern County Planning Department for review and approval.

MM 4.3-9 Prior to ground disturbance activities, the project proponent shall implement the following Valley Fever Provisions:

- a. Provide evidence to the Kern County Planning and Natural Resources Department that the project operator and/or construction manager has developed a “Valley Fever Training Handout”, training, and schedule of sessions for education to be provided to all construction personnel. All evidence of the training session materials, handout(s) and schedule shall be submitted to the Kern County Planning and Natural Resources Department within 24 hours of the first training session. Multiple training sessions may be conducted if different work crews will come to the site for different stages of construction; however, all construction personnel shall be provided training prior to beginning work. The training may be administered using video or other electronic media. The evidence submitted to the Kern County Planning and Natural Resources Department regarding the “Valley Fever Training Handout” and Session(s) shall include the following:
 1. A sign-in sheet (to include the printed employee names, signature, and date) for all employees who attended the training session.
 2. Distribution of a written flier or brochure that includes educational information regarding the health effects of exposure to criteria pollutant emissions and Valley Fever.
 3. Training on methods that may help prevent Valley Fever infection.
 4. A demonstration to employees on how to use personal protective equipment, such as respiratory equipment (masks), to reduce exposure to pollutants and facilitate recognition of symptoms and earlier treatment of Valley Fever. Where respirators are required, the equipment shall be readily available and shall be provided to employees for use during work. Proof that the demonstration is included in the training shall be submitted to the county. This proof can be via printed training materials/agenda, DVD, digital media files, or photographs.

- b. The project proponent also shall consult with the Kern County Health Services Department to develop a Valley Fever Dust Management Plan that addresses the potential presence of the *Coccidioides* spore and mitigates for the potential for Coccidioidomycosis (Valley Fever). Prior to issuance of permits, the project operator shall submit the Plan to the Kern County Public Health Department for review and approval. The Plan shall include a program to evaluate the potential for exposure to Valley Fever from construction activities and to identify appropriate safety procedures that shall be implemented, as needed, to minimize personnel and public exposure to potential *Coccidioides* spores. Measures in the Plan shall include the following:
1. Provide High-Efficiency Particulate Air filters for heavy equipment equipped with factory enclosed cabs capable of accepting the filters. Require contractors utilizing applicable heavy equipment to furnish proof of worker training on proper use of applicable heavy equipment cabs, such as turning on air conditioning prior to using the equipment.
 2. Provide communication methods, such as two-way radios, for use in enclosed cabs.
 3. Require National Institute for Occupational Safety and Health- approved half-face respirators equipped with minimum N-95 protection factor for use during worker collocation with surface disturbance activities, as required per the hazard assessment process.
 4. Cause employees to be medically evaluated, fit-tested, and properly trained on the use of the respirators, and implement a full respiratory protection program in accordance with the applicable California Occupational Safety and Health Administration Respiratory Protection Standard (8 California Code of Regulations Section 5144).
 5. Provide separate, clean eating areas with hand-washing facilities.
 6. Install equipment inspection stations at each construction equipment access/egress point. Examine construction vehicles and equipment for excess soil material and clean, as necessary, before equipment is moved off site.
 7. Train workers to recognize the symptoms of Valley Fever, and to promptly report suspected symptoms of work-related Valley Fever to a supervisor.
 8. Work with a medical professional to develop a protocol to medically evaluate employees who develop symptoms of Valley Fever.
 9. Work with a medical professional, in consultation with the County Health Services Department, to develop an educational handout for on-site workers and surrounding residents within 3 miles of the project site, and include the following information on Valley Fever: what are the potential sources/causes, what are the common symptoms, what are the options or remedies

available should someone be experiencing these symptoms, and where testing for exposure is available. Prior to construction permit issuance, this handout shall have been created by the project operator and reviewed by the project operator and reviewed by the County. No less than 30 days prior to any work commencing, this handout shall be mailed to all existing residences within 3 miles of the project boundaries.

10. When possible, position workers upwind or crosswind when digging a trench or performing other soil-disturbing tasks.
11. Prohibit smoking at the worksite outside of designated smoking areas; designated smoking areas will be equipped with handwashing facilities.
12. Post warnings on-site and consider limiting access to visitors, especially those without adequate training and respiratory protection.

MM 4.3-10 Prior to the issuance of grading permits, a onetime fee shall be paid to the Kern County Public Health Services Department in the amount of \$3,200 for public awareness programs.

Level of Significance after Mitigation

Even with implementation of Mitigation Measures **MM 4.3-1** through **MM 4.3-10**, the uncertainty of the project's regional and localized health impacts associated with criteria air pollutants, such as PM_{2.5} along with indirect linkages of criteria pollutants and COVID-19, on vulnerable populations would result in significant and unavoidable project level impacts.

Impact 4.3-4: The project would result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SJVAPCD's GAMAQI states "An analysis of potential odor impacts should be conducted for both of the following two situations:

- a. Generators – projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
- b. Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources."

GAMAQI also states "The District has identified some common types of facilities that have been known to produce odors in the San Joaquin Valley Air Basin. These are presented in Table 6 (Screening Levels for Potential Odor Sources), can be used as a screening tool to qualitatively assess a project's potential to adversely affect area receptors." Because operation of the project is a state of the art covered and aerated static pile composting facility which utilizes a biofilter, it has not and is not expected to cause a public nuisance due to odor. The anticipated project site is not

listed in Table 6 of the GAMAQI as a source which would create objectionable odors, therefore the project is not expected to be a source of objectionable odors.

Based on analysis contained in the Air Quality Impact Analysis technical study prepared by Insight Environmental/Trinity Consultants for the proposed project, the provisions of the SJVAPCD's GAMAQI would not exceed any screening trigger levels to be considered a source of objectionable odors or odorous compounds. Furthermore, there does not appear to be any significant source of objectionable odors in close proximity that may adversely impact the project site when it is in operation. Additionally, the project emission estimates indicate that the proposed project would not be expected to adversely impact surrounding receptors. As such, the proposed project would not be a source of any odorous compounds nor would it likely be impacted by any odorous source.

When the project site was originally developed, the regulations of the California Integrated Waste Management Board, Title 14, CCR Section 17863.4 required all compostable material handling operations and facilities to prepare and maintain a site-specific Odor Impact Minimization Plan (OIMP) to minimize the potential for nuisance-level off-site odors. Synagro's SKIC facility developed an OIMP and maintains the plan with oversight by the Kern County Environmental Health Services Department.

In order to continue compliance with the OIMP, the plan would be updated to reflect the changes planned by the current project and would make adjustments to the Odor Monitoring Protocol, Operating Procedures to Minimize Odor and Contingency Plans as necessary. These changes to the OIMP would further ensure that the project would not impact nearby receptors. Thus, impacts would be less than significant and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

The Kern County Planning and Natural Resources Department's *Guide for Preparing an Air Quality Assessment for Use in Environmental Impact Reports* has determined that a cumulative analysis must be prepared for a proposed development when the project is required to prepare an EIR. The cumulative analysis is used to consider localized impacts, determine consistency with existing air quality plans, and provide a comparison of the project's impacts to the SJVAB emissions.

The air quality analysis conducted for this project, which is included as Appendix B to this EIR, indicates that, with mitigation, project impacts would not be individually significant. The air quality impact analysis, however, also considered impacts of the proposed project in conjunction with the impacts of other past, present, and reasonably foreseeable projects in the air basin. The following cumulative impacts were considered.

- Cumulative Ozone Impacts (ROG and NO_x) from numerous sources within the region, including transport from outside the region. Ozone is in chemical reactions produced by ROG, NO_x, and sunlight.
- Cumulative CO Impacts produced primarily by vehicular emissions.
- Cumulative PM₁₀ Impacts within the region and locally from the various projects. Such projects may cumulatively produce a significant amount of PM₁₀ if several projects conduct grading or earthmoving activities at the same time.
- HAP Impacts on sensitive receptors within the SJVAPCD-recommended screening radius of one mile.

The geographic scope for cumulative air quality impacts is a 6-mile radius for regional impacts and a 1-mile radius for impacts on sensitive receptors. These geographic scopes of analysis are appropriate for determining air quality impacts because of the Statewide, regional, and localized nature of air quality impacts, which could occur cumulatively with the project. This cumulative impact analysis uses a tiered approach to provide the reader with a thorough understanding of local, regional, and valley-wide air quality conditions and the proposed project's contribution to cumulative air quality impacts. The cumulative project list is provided in **Table 3-4, Cumulative Project List**, in **Chapter 3.0, Project Description**, of this document. This geographic scope of analysis is appropriate because of influence of the area with wildfires, as well as the localized nature of impacts related to hazardous materials and other hazards discussed in this section.

As noted previously, the SJVAB is a nonattainment area for the State 1-hour O₃, 8-hour O₃, PM₁₀, and PM_{2.5} standards and is a nonattainment area for National 8-hour O₃ and PM_{2.5} standards. As previously discussed, project construction and operational emissions of these pollutants are not anticipated to violate or lead to additional violations of NAAQS and CAAQS. Consistent with the SJVAPCD GAMAQI, the project would accordingly result in a less-than significant cumulative impact in relation to criteria air pollutants:

By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development. Future attainment of State and Federal ambient air quality standards is a function of successful implementation of the District's attainment plans. Consequently, the District's applicant of thresholds of significance for criteria pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program.

Thus, if project specific emissions would be less than the thresholds of significance for criteria pollutants, as a general matter the project would not be expected to result in a cumulatively considerable net increase of any criteria pollutant for

which the District is in non-attainment under applicable Federal or State ambient air quality standards (SJVAPCD 2015a).

However, because of scientific uncertainty regarding the offsetting of NO_x emissions through VOC reductions, and because Kern County does not have jurisdiction and control over all potential projects in the SJVAB and, thus, cannot assure that such projects would fully offset their criteria emissions pursuant to a DMC, cumulative impacts for criteria pollutants are considered significant and unavoidable.

Cumulative Regional Air Quality Impacts

The most recent, certified SJVAB Emission Inventory data available from the SJVAPCD is based on data gathered for the 2015 annual inventory. This data is used to assist the SJVAPCD in demonstrating attainment of Federal 1-hour O₃ Standards. **Table 4.3-10, Comparative Analysis Based on SJV Air Basin 2015 Inventory** provides a comparative look at the impacts proposed by the proposed project to the SJVAB Emissions Inventory.

Emissions Inventory Source	Pollutant (tons/year)					
	ROG	NO _x	C O	SO _x	PM ₁₀	PM _{2.5}
Kern County - 2015 ¹	22,484	20,842	33,872	511	13,688	3,833
SJVAB - 2015 ¹	112,931	96,105	199,509	2,738	95,667	21,681
Proposed Project Incremental	-2.43	-24.02	-7.78	0.00	-1.45	-1.37
Proposed Project's % of Kern ²	0.00	0.00	0.00	0.00	0.00	0.00
Proposed Project's % of SJVAB ²	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

¹ This is the latest inventory available as of June 2018, excluding Natural Sources.

² 0.00 represents less than 0 percent since the Project's incremental emissions are less than 0.

Source: Insight Environmental Consultants, 2020.

As shown in **Table 4.3-10, Comparative Analysis Based on SJV Air Basin 2015 Inventory** the proposed project does not pose a substantial increase to basin emissions, as such basin emissions would be essentially the same if the project is approved.

Tables 4.3-11 through 4.3-13 provide CARB Emissions Inventory projections for the year 2020 for both the SJVAB and the Kern County. Looking at the SJVAB Emissions predicted by the CARB year 2020 emissions inventory, the Kern County portion of the air basin is a moderate source of the emissions. The proposed project produces a small portion of the total emissions in both Kern County and the entire SJVAB.

	ROG	NO _x	PM ₁₀
Total Emissions	108,113	74,205	162,425
Percent Stationary Sources	30.83%	14.07%	6.22%
Percent Area-Wide Sources	51.59%	3.89%	11.96%
Percent Mobile Sources	17.57%	82.05%	81.82%
Total Stationary Source Emissions	33,335	10,439	10,111

Table 4.3-11: Emission Inventory SJVAB 2020 Projection – Tons per Year

Total Area-Wide Source Emissions	55,779	2,884	19,418
Total Mobile Source Emissions	18,991	60,882	132,897

Note: Total may not add due to rounding.

Source: Insight Environmental Consultants, 2020.

Table 4.3-12: Emission Inventory Kern County 2020 Estimate Projection – Tons per Year

	ROG	NO _x	PM ₁₀
Total Emissions	21,535	15,878	27,339
Percent Stationary Sources	52.03%	18.39%	14.82%
Percent Area-Wide Sources	33.73%	2.76%	6.94%
Percent Mobile Sources	14.24%	78.62%	78.24%
Total Stationary Source Emissions	11,206	2,920	4,052
Total Area-Wide Source Emissions	7,264	438	1,898
Total Mobile Source Emissions	3,066	12,483	21,389

Note: Total may not add due to rounding.

Source: Insight Environmental Consultants, 2020.

Table 4.3-13: 2020 Emissions Projections – Proposed Project, Kern County, and San Joaquin Valley Air Basin

	ROG	NO _x	PM ₁₀
Proposed Project	-2.43	-24.02	-1.45
Kern County	21,535	15,878	13,651
SJVAB	108,113	74,205	96,652
Proposed Project Percent of Kinga County	0.00%	0.00%	0.00%
Proposed Project Percent of SJVAB	0.00%	0.00%	0.00%
Kern County Percent of SJVAB	19.92%	21.40%	14.12%

Notes: The emission estimates for Kern County and the SJVAB are based on 2020 projections. The Proposed project emission estimates are for the proposed emissions that are not already included in the SJVAB Emissions Inventory. Project emissions are based on 2019 emissions estimates to present the most conservative comparison. The project's emissions are expected to decline as cleaner, less polluting vehicles replace vehicles with higher emissions.

Source: Insight Environmental Consultants, 2020.

As shown above, the proposed project would pose no impact on regional O₃ and PM₁₀ formation. Because the regional contribution to these cumulative impacts would be negligible, the project would not be considered cumulatively considerable in its contribution to regional O₃ and PM₁₀ impacts.

Cumulative Hazardous Air Pollutants

The GAMAQI states that when evaluating potential impacts related to HAPs, “impacts of local pollutants (CO, HAPs) are cumulatively significant when modeling shows that the combined emissions from the project and other existing and planned projects will exceed air quality standards.” Because the project would not be a significant sources of HAPS, the proposed project would also not be expected to pose a significant cumulative CO or HAPs impact.

Cumulative Carbon Monoxide (CO) – Mobile Sources

The SJVAPCD's GAMAQI has identified CO impacts from impacted traffic intersections and roadway segments as being potentially cumulatively considerable. Traffic increases and added congestion caused by a project can combine to cause a violation of the SJVAPCD's CO standard also known as a "Hotspot". There are two criteria established by the GAMAQI by which CO "Hot Spot" modeling is required:

- A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or
- A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at one or more intersections in the project vicinity.

As discussed in **Chapter 4.15, Transportation**, no adverse increase in vehicular traffic is anticipated when compared to existing traffic levels and the project would not reduce any street or intersection to a LOS E or F and would not worsen any already existing LOS F of any street or intersection after mitigation. Therefore, CO "Hotspot" Modeling was not conducted for this project and no concentrated excessive CO emissions are expected to be caused once the proposed project is completed.

Cumulative Local Air Quality Impacts

As stated previously, **Table 3-4, Cumulative Projects List** contains a list of other projects located within six miles of the proposed project. The number or size of cumulative projects is of no particular significance since no "cumulative" emissions thresholds have been established by the SJVAPCD or the Kern County Planning and Natural Resources Department. Because the proposed project would have a decrease in incremental emissions, the project-related operational impacts from criteria air pollutants are less than significant, additionally, the project's contribution to cumulative air quality impacts would not be cumulatively considerable.

However, potential cumulative impacts to air quality could occur from construction and operation of the proposed project in combination with regional growth projections in the same air basin. The SJVAPCD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SJVAB at the present time and it has not provided methodology to assess the specific correlation between mass emissions generated and the effect on public health and welfare. It is possible that the emissions from the proposed project would contribute to an exceedance of the regional thresholds in conjunction with other past, present, and reasonably foreseeable projects, that it would affect the number of days the region is in nonattainment, and that the increased concentrations of emissions could affect individuals in the SJVAB. Therefore, cumulative impacts for criteria pollutants are considered significant and unavoidable.

Mitigation Measures

Implement Mitigation Measures **MM 4.3-1** through **MM 4.3-10**.

Level of Significance after Mitigation

Cumulative impacts would be significant and unavoidable during construction and operation of the project, even with implementation of Mitigation Measures **MM 4.3-1** through **MM 4.3-10**. The uncertainty of the project's regional and localized health impacts associated with criteria air pollutants, such as PM_{2.5}, along with indirect linkages of criteria pollutants and COVID-19, on vulnerable populations would result in significant and unavoidable project level impacts.

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Section 4.4

Biological Resources

4.4.1 Introduction

The purpose of this section is to identify existing biological resources on-site and in the vicinity of the proposed project, analyze potential project-related impacts on these resources (including special-status species and habitats), and recommend mitigation measures to reduce the significance of impacts. This section documents the biological resources and conditions for the project site in terms of vegetation, flora, wildlife, and wildlife habitats, and analyzes the biological significance of the site in accordance with Federal, State and local laws and policies.

The analysis provided in this section is based on the findings of the Biological Resources Technical Report prepared by Dudek on May 14, 2019 and subsequently in August 2020. The technical report is attached to this Draft Environmental Impact Report (DEIR) as Appendix D. The total project site is approximately 100-acres and consists of an existing approximate 44-acre existing compost facility. The remaining undeveloped 56-acres of the site consists of undeveloped land that is routinely disked for vegetation and weed management. For the purpose of this report, the area investigated included the approximately 56-acre proposed project site plus a 500-foot buffer around the boundary of the 100-acre project parcel where accessible (study area). The study area for the proposed project accounts for both on-site and off-site biological resources that may be impacted by the proposed project.

Literature and database searches were conducted to assess the potential for special status biological resources to occur within the project site. The review included: (1) the California Natural Diversity Database (CNDDDB) for special-status wildlife species, special-status plant species, and sensitive vegetation communities; (2) IPaC Trust Resources Report that lists potentially occurring federally listed species from the U.S. Fish and Wildlife Service's (USFWS's); (3) the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2019); and (4) USFWS's National Wetlands Inventory. Other sources of information reviewed include the most recent and available aerial photographs (Google Earth, 2020), United States Geological Survey (USGS) 7.5-minute quadrangle topographic maps, soil survey maps (Natural Resource Conservation Science [NRCS], 2020), Western Regional Climate Center [WRCC], 2020), and the project's site plans.

Subsequent to the review of the listed databases, biological resources surveys and habitat assessment surveys were conducted within the project site on May 14, 2019. The potential for special-status plant and wildlife species to occur was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distribution in the area. The study area was evaluated via a pedestrian survey. Biological resources and potential biological constraints were identified and inventoried. Potential special-status biological resources identified during the survey were mapped using ESRI Collector Mapping System for inclusion in the report figures and all plant and wildlife species observed during the site visit were recorded. Plants were detected and identified through direct sight. Wildlife species were detected by sight, calls, tracks, scat, or other signs.

4.4.2 Environmental Setting

Regional Setting

Climate

The climate in the southern San Joaquin Valley region consists of hot summer temperatures (average daily maximum near or above 90 degrees Fahrenheit [°F]) and low annual precipitation (approximately 12 inches). Daily temperature swings of 30°F can occur, with lows in the winter near freezing. Precipitation generally occurs within the winter and spring with very little occurring during the summer as a result of summer thunderstorms. Wind speeds are generally mild to moderate, from 0 to 10 mph, with gusts upwards of 40 mph on rare occasions. Temperatures have an average high of 97.4°F in July to a low of 36.8°F in January. Average rainfall is 5.70 inches annually (WRCC, 2020).

Vegetation

Vegetation in the San Joaquin Valley region is influenced by arid climatic conditions, topography, and past land uses. This region is an elongate, north–south-oriented lowland surrounded by all other regions of the California Floristic Province (CA-FP) and bordered mostly by coastal ranges to the west and the Sierra Nevada Mountains to the east. On all borders, it ends where oak-pine woodlands or mixed hardwood forests begin.

Native vegetation in the region has largely been replaced by a variety of agricultural uses. However, the San Joaquin Valley still supports grasslands, marshes, vernal pools, riparian woodlands, alkali sink vegetation, and stands of valley oak as well as some desert elements in the southern San Joaquin Valley

Wildlife

The San Joaquin Valley supports a variety of reptiles, birds and mammals. Reptile species commonly occurring in the San Joaquin Valley portion of Kern County include the side-blotched lizard (*Uta stansburiana*), western whiptail (*Aspidoscelis tigris munda*), and gopher snake (*Pituophis melanoleucus*). Bird species common to the region include common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), western meadowlark (*Sturnella neglecta*), house finch (*Haemorhous mexicanus*), and red-tailed hawk (*Buteo jamaicensis*). Mammal species typical of the area include California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), black-tailed jackrabbit (*Lepus californicus*) and bat species include the Yuma myotis (*Myotis yumanensis*).

Sensitive Natural Communities

Sensitive natural communities are designated as such by California Department of Fish and Wildlife (CDFW) and are generally considered to have important functions or values for wildlife or are recognized as declining in extent and/or distribution. These communities are considered threatened enough to warrant some level of protection. CDFW tracks communities it believes to be of conservation concern through the CNDDDB and plant alliances or associations with a State rank of S1 through S3 are considered to be sensitive communities. Habitat within the study area

consisted ruderal and barren disked fields. Neither community is considered sensitive by CDFW (DUDEK, 2020).

Surface Hydrology and Jurisdictional Waters

Within the arid and semi-arid western United States, limited precipitation restricts wetland and riparian resources to 1 to 5 percent of the land surface, a relatively low proportion compared to other systems globally (U.S. Army Corps of Engineers [USACE], 2008).

The southern portion of San Joaquin Valley where the project occurs in an isolated subbasin that comprises approximately 2,600 square miles of alluvial valley. The project site is in the Middle Kern-Upper Tehachapi-Grapevine Subbasin and Liveoak Canyon-Pastoria Creek watershed. This subbasin is bound by the Tehachapi Mountains to the east and south and the San Emigdio Mountains to the west. The southern portion of the Central Valley, known as the San Joaquin Valley, is drained by the San Joaquin River, which is a known waters of the U.S. and State and is also subject to the jurisdiction of CDFW. This portion of the valley drains to Tulare Lake, which no longer exists due to diversions of its sources, and is known as the Tulare Lake Hydrologic Region. Tulare Lake was the largest of several similar lakes (e.g., Kern and Buena Vista lakes) in the lower basin. The lake historically received water from the Kern, Tule, and Kaweah Rivers, as well as southern tributaries of the Kings River. Diversions for agriculture and municipal purposes has resulted in the lake drying up except for residual wetlands and occasional floods. These lakes have now been dry for many decades and the lake bottoms are now heavily farmed. Aquatic resources in the region typically lack waters of the U.S. due them being non-navigable, isolated water bodies. However, they may contain a combination of waters of the state and CDFW jurisdiction. Site specific information related to hydrology is provided in **Chapter 3.9, Hydrology and Water Quality** of this study.

Wildlife Movement Corridors

The project site is within the southwestern portion of the San Joaquin Valley and in an area that is dominated by undeveloped agricultural lands. The area also contains scattered vegetation communities, paved and unpaved roads, and provides for largely unrestricted wildlife movement through the natural or semi-natural habitats. Wildlife movement corridors are defined as linear features that connect large patches of natural open space and provide avenues for the migration of animals. Habitat linkages can be thought of as smaller patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Both Corridors and linkages also can serve as primary habitat for smaller animals, such as reptiles and amphibians.

Major roadways including Interstate 5 (I-5) and State Route 99 (SR-99) and other features such as the California aqueduct which flows from north to south through the valley restrict wildlife movement to specific crossings within the very San Joaquin Valley. The largest roadways near the project is South Lake Road, but it is not a major impediment to wildlife movement. In addition, while migratory birds do fly over the San Joaquin Valley, there are no significant stopover sites in the vicinity of the project site, as there are no riparian habitats or water bodies with abundant resources to attract concentrations of birds.

The project site is heavily disturbed and due to ongoing activities, it is unlikely that any portion of the project site would serve as an important linkage between habitats. In addition, there are no

regional migratory wildlife corridors that have been identified by the County or state resources agencies on the project site or study area.

Local Setting

The proposed project site is located on Assessor's Parcel Number (APN) 220-110-70 at 2653 Santiago Road in the western region of unincorporated Kern County, California. The existing parcel is occupied by the existing 44-acre Synagro composting facility as well as 56 acres of undeveloped vacant land. The project site is immediately accessed from Santiago Road, which is connected to I-5 approximately 7 miles to the west via South Lake Road and Millux Road.

The portions of the study area not occupied by the composting facility are currently undeveloped and routinely disked for vegetation and weed control. Because of this, the study area surrounding the composting facility contains little to no vegetation. The vegetation that is present consists of upland and ruderal species. The southern portion of the study area, however, retains vegetative cover over approximately 0.5 acres. This area is associated with an artificial burrow that was placed for use by burrowing owl by the California Department of Fish and Wildlife (CDFW). This area also contains an old dirt spoil pile and a small depression where stormwater collects but is generally barren when dry. Overall, the study area is flat with no significant topographic features and is approximately 313 feet on both the northerly and southerly sides. The composting facility slopes from approximately 313 feet above mean sea level (amsl) in the northeastern corner to approximately 323 feet amsl along the southwestern boundary of the facility.

Vegetation and General Botanical Surveys

Surveys were conducted for natural vegetative communities and land cover of the project site on May 14, 2019. A Subsequent Biological Resources Technical Report was prepared on August 3, 2020. Vegetation that was recorded within the study area consisted of 13 species of vascular plants including 3 native species and 10 non-native species. The dominant plant species included California sage brush, California buckwheat, and black sage. Within the study area the native scrub community contains a higher species diversity.

The undeveloped portion of the project site consists of a combination of an approximately 0.5-acre area with ruderal vegetation and the balance of this portion of the site, approximately 55 acres, largely consists of barren and disked land. The 0.5-acre area with ruderal vegetation has been maintained due to the installation of two artificial burrowing owl burrows installed by CDFW. Ruderal vegetation areas are characterized by weedy, non-native, and often invasive species resulting in low ecological value. Ruderal vegetation typically occupies areas with a history of past human disturbances and generally provides little habitat or foraging potential for wildlife and generally lack substantial cover and food value. The barren and disked land is highly disturbed and contains little native or non-native vegetation and cover. Lastly, the low-lying depression within the southerly portion of the project parcel accumulates water during storm events but is considered barren when dry. There are no sensitive vegetation communities within this area or elsewhere on the project site.

Special Status Plant Species

Special-status plants include listed species as threatened or endangered, or species that are candidates for listing by USFWS or CDFW, or species identified as rare by CNPS (particularly California Rare Plant Rank (CRPR) 1A – Presumed extinct in California; CRPR 1B – Rare, threatened, or endangered throughout its range; and CRPR 2 – Rare or Endangered in California, more common elsewhere).

Table 4.4-1, *Special Status Plants with Potential to Occur in the Study Area* lists 11 sensitive plants listed in the CNDDDB, CNPS, and USFWS databases known to occur in the vicinity of the proposed project. Of the listed 11-special status plant species, none were determined to have potential to occur within the study area or on the project site. This determination was based on an evaluation of species ranges/elevation and known habitat preferences. While the survey was not conducted within the blooming or phenological period for several special-status plant species, no special status species were observed on the project site during the May 2019 survey or as part of the subsequent Biological Resources Technical Report. In addition, due to the high level of disturbance from disking and crop rotations and lack of native species, it was concluded that the project site does not contain suitable habitat for special-status plant species.

Table 4.4-1: Special Status Plants Species with Potential to Occur in the Study Area

Scientific Name Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/life form/blooming period/elevation range	Potential to Occur
<i>Atriplex cordulata</i> var. <i>cordulata</i> Heartscale	None/None/4.2	Chenopod scrub, Meadows and seeps, Valley and foothill grassland (sandy); saline or alkaline/annual herb/Apr–Oct/ - 0 to 1835 feet above mean sea level (amsl).	Not expected to occur. No impacts are anticipated.
<i>Atriplex coronate</i> var. <i>coronate</i> crownscale	None/None/4.2	Chenopod scrub, Valley and foothill grassland, Vernal pools; alkaline, often clay/annual herb/Mar–Oct/ - 0 to 1935 feet amsl.	Not expected to occur. No impacts are anticipated.
<i>Calochortus striatus</i> Alkali mariposa lily	None/None/1B.2	Chaparral, Chenopod scrub, Mojavean desert scrub, Meadows and seeps; alkaline, mesic/perennial bulbiferous herb/Apr–June - 225–5235 feet amsl.	Not expected to occur. No impacts are anticipated.
<i>Caulanthus californicus</i> California jewelflower	FE/EE/1B.1	Chenopod scrub, Pinyon and juniper woodland, Valley and foothill grassland; sandy/annual herb/Feb–May - 200 to 3280 feet amsl	Not expected to occur. No impacts are anticipated.

Table 4.4-1: Special Status Plants Species with Potential to Occur in the Study Area

Scientific Name Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/life form/blooming period/elevation range	Potential to Occur
<i>Delphinium recurvatum</i> recurved larkspur	None/None/1B.2	Chenopod scrub, Cismontane woodland, Valley and foothill grassland; alkaline/perennial herb/Mar to June – 5 to 2590 feet amsl	Not expected to occur. No impacts are anticipated
<i>Eremalche parryi</i> ssp. <i>kernensis</i> Kern mallow	FE/None/1B.2	Chenopod scrub, Pinyon and juniper woodland, Valley and foothill grassland; On dry, open sandy to clay soils; often at edge of balds/annual herb/Jan,Mar,Apr,May(Feb – 225 to 4230 feet amsl.	Not expected to occur. No impacts are anticipated.
<i>Eriastrum hooveri</i> Hoover's woolly star	None/None/4.2	Chenopod scrub, Pinyon and juniper woodland, Valley and foothill grassland; Sometimes gravelly/annual herb/(Feb)Mar– July – 160 to 3000 feet amsl	Not expected to occur. No impacts are anticipated.
<i>Eriogonum gossypinum</i> Cottony buckwheat	None/None/4/2	Chenopod scrub, Valley and foothill grassland; clay/annual herb/Mar–Sep – 325 to 1805 feet amsl	Not expected to occur. No impacts are anticipated.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	S/-/1B.1	Marshes and swamps (coastal salt), Playas, Vernal pools/annual herb/Feb–June – 0 to 4005 feet amsl	Not expected to occur. No impacts are anticipated.
<i>Opuntia basilaris</i> var. <i>treleasei</i> Bakersfield cactus	FE/SE/1B.1	Chenopod scrub, Cismontane woodland, Valley and foothill grassland; sandy or gravelly/perennial stem succulent - Apr–May – 390 to 4755 feet amsl.	Not expected to occur. No impacts are anticipated.
<i>Stylocline citroleum</i> oil neststraw	None/None/1B.1	Chenopod scrub, Coastal scrub, Valley and foothill grassland; clay/annual herb/Mar–Apr – 160 to 1310 feet amsl.	Not expected to occur. No impacts are anticipated.
STATUS: Federal and State Listing Code:	California Rare Plant Rank (CRPR) 1B. Plants considered rare, threatened, or endangered in California and elsewhere; 4: Plants of limited distribution – a watch list.		

Table 4.4-1: Special Status Plants Species with Potential to Occur in the Study Area

Scientific Name Common Name	Status Federal/State/ CRPR	Primary Habitat Associations/life form/blooming period/elevation range	Potential to Occur
FE = Federally listed as endangered; ST = State listed as threatened CNPS (California Native Plant Society)	Threat Ranks: .1 Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat .2 Moderately threatened in California (20% to 80% of occurrences threatened/moderate degree and immediacy of threat).		

Source: Dudek, 2019

Wildlife Surveys

The project area was evaluated for the potential to contain or provide habitat for special-status wildlife species. Special-status wildlife species are those that are listed as threatened or endangered by USFWS or CDFW, designated as Species of Special Concern by CDFW, or those that are listed as candidates for listing. A total of 23 special-status wildlife species were reported in the CNDDDB and USFWS databases as occurring in the vicinity of the study area. **Table 4.4-2, Special-Status Wildlife Species That May Occur in the Vicinity of the Project Site**, shows these species. A total of seven wildlife taxa were observed and recorded in the study area. As noted above, the study area largely consisted of a barren/disked field and provides little habitat value. Common species detected or observed during the survey and other species potential to occur are listed in **Table 4.4-2**. It should be noted that no wildlife species listed or proposed for listing as rare, threatened, or endangered by either CDFW or USFWS were observed or detected within the study area during the site reconnaissance and focused species surveys.

Table 4.4-2: Special Status Wildlife That May Occur in the Vicinity of Project Site

Scientific Name Common Name	Status Federal/State	Habitat	Potential to Occur
Reptiles			
<i>Arizona elegans occidentalis</i> California glossy snake	None/SSC	Commonly occurs in desert regions throughout southern California. Prefers open sandy areas with scattered brush. Also found in rocky areas.	Not expected to occur. No suitable habitat present in the study area
<i>Gambelia sila</i> Blunt-nosed leopard lizard (BNLL)	FE/FP,SE	Sparsely vegetated alkali and desert scrubs, including semiarid grasslands, alkali flats, and washes	Not expected to occur. No suitable habitat present in the study area
<i>Thamnophis gigas</i> Giant garter snake	FT/ST-	Freshwater marsh habitat and low-gradient streams; also uses canals and irrigation ditches	Not expected to occur. No suitable habitat present in the study area
Birds			
<i>Agelaius tricolor</i> Tricolored blackbird	BCC/SCC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Not expected to occur. No suitable nesting habitat present in the study area. The stormwater sump in the northwest does not contain any nesting

Table 4.4-2: Special Status Wildlife That May Occur in the Vicinity of Project Site

Scientific Name Common Name	Status Federal/State	Habitat	Potential to Occur
			habitat and is actively managed for weed control.
<i>Athene cunicularia</i> Burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Medium potential to occur. The study area has a small area where two artificial burrowing owl burrows were constructed in the past
<i>Buteo swainsoni</i> Swainson's hawk	BCC/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Not expected to occur. No nesting or foraging habitat present on the study area. The study area is approximately 3.9 miles east of a known historical record of a SWHA nest. However, the Project site does not have any nesting trees within ½ mile of the site. Due to higher quality of nesting and foraging within the region, SWHA have low potential to occur within the study area.
<i>Charadrius alexandrius nivosus</i> (nesting) western snowy plover	FT, BCC/SSC	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Not expected to occur. No suitable nesting habitat present in the study area.
<i>Coccyzus americanus occidentalis</i> (nesting) western yellow-billed cuckoo	FT, BCC/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. No suitable nesting habitat present in the study area.
<i>Dendrocygna bicolor</i> (nesting) fulvous whistlingduck	None/SSC	Nests in freshwater wetlands, especially shallow impoundments managed for rice production and temporarily flooded grasslands; also nests in pastures, haylands, and small grain fields adjacent to rice fields	Not expected to occur. No suitable nesting habitat present in the study area.
<i>Plegadis chihi</i> (nesting colony) white-faced ibis	None/W:	Nests in shallow marshes with areas of emergent vegetation; winter foraging in shallow lacustrine waters, flooded agricultural fields, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields, and estuaries	Not expected to occur. No suitable nesting habitat present in the study area.
<i>Toxostoma lecontei</i> LeConte's thrasher	BCC/SSC	Nests and forages in desert wash, desert scrub, alkali desert scrub, desert succulent, and	Not expected to occur. No suitable nesting habitat present in the study area.

Table 4.4-2: Special Status Wildlife That May Occur in the Vicinity of Project Site

Scientific Name Common Name	Status Federal/State	Habitat	Potential to Occur
		Joshua tree habitats; nests in spiny shrubs or cactus	
<i>Vireo bellii pusillus</i> Least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. No suitable nesting habitat present in the study area.
<i>Xanthocephalus xanthocephalus</i> yellow-headed blackbird	None/SSC	Nests in marshes with tall emergent vegetation, often along borders of lakes and ponds; forages in emergent wetlands, open areas, croplands, and muddy shores of lacustrine habitat	Not expected to occur. No suitable nesting habitat present in the study area.
Mammals			
<i>Ammospermophilus nelsoni</i> Nelson's antelope squirrel	None/ST	Arid annual grassland and shrubland with saltbushes (<i>Atriplex</i> spp.), California jointfir (<i>Ephedra californica</i>), bladderpod (<i>Physaria</i> spp.), goldenbushes (<i>Astereae</i>), snakeweed (<i>Gutierrezia</i> spp.)	Not expected to occur. No suitable habitat present on the Project site. The soils as well as the regular tilling of the Project site make this unsuitable habitat.
<i>Dipodomys ingens</i> Giant kangaroo rat	FE/SE	On fine sandy loam soils with sparse forb vegetation and low-density alkali desert scrub	Not expected to occur. No suitable habitat present in the study area.
<i>Dipodomys nitratooides brevinasus</i> short-nosed kangaroo rat	None/SSC	Friable soils on flat or gently rolling terrain in grassland and desert-shrub vegetation	Not expected to occur. The study area is outside the known range for this species.
<i>Dipodomys nitratooides nitratooides</i> Tipton kangaroo rat	FE/SE	Alluvial fan and floodplain soils; habitat with one or two species of sparsely scattered shrubs and a ground cover of introduced and native annual grasses and forbs	Not expected to occur. No suitable habitat present in the study area.
<i>Eumops perotis californicus</i> Western mastiff bat	None/SSC	Low, open scrub, and semiscrub habitats in arid Lower Sonoran associations	Not expected to occur. No suitable habitat present in the study area. The clay loam soils as well as the regular tilling of the Project site make this unsuitable habitat.
<i>Onychomys torridus tularensis</i> Tulare grasshopper mouse	None/SSC	Low, open scrub, and semiscrub habitats in arid Lower Sonoran associations	Not expected to occur. No suitable habitat present in the study area. The clay loam soils as well as the regular tilling of the Project site make this unsuitable habitat.

Table 4.4-2: Special Status Wildlife That May Occur in the Vicinity of Project Site

Scientific Name Common Name	Status Federal/State	Habitat	Potential to Occur
<i>Sorex ornatus relictus</i> Buena Vista Lake shrew	FE/SSC	Marshes, wetlands, streams, and sloughs along lake basins in southern San Joaquin Valley; historical occurrences include Buena Vista, Tulare, and Kern Lakes; distribution poorly known	Not expected to occur. No suitable habitat present in the study area.
<i>Taxidea taxus</i> American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. Although badgers will utilize a variety of habitats, the study area is regularly tilled, which makes the site unsuitable. No suitable burrows for badger were observed during the survey effort.
<i>Vulpes macrotis mutica</i> San Joaquin kit fox (SJKF)	FE/ST	Grasslands and scrublands, including those that have been modified; oak woodland, alkali sink scrubland, vernal pool, and alkali meadow	Medium potential to occur. The study area provides marginally suitable habitat for this species to forage or burrow. Marginally suitable denning habitat is present. Although no sign of presence of SJKF was observed during surveys of the site, this species occurs within the region and could pass through the study area or potentially den there in the future.

Federal Status	State Status
FE Federally Threatened	SE State Endangered
FP State Fully Protected	ST State Threatened
FDL Federally Delisted	SSC California Species of Concern
	BCC Bird of Conservation Concern
	WL CDFG Watch List

Amphibians

No amphibian species were observed during the field survey. Amphibians require standing or flowing water for part or all of their life cycle. Ponds, seasonal pools, and drainages provide suitable habitat for common amphibian species. The ponded water located in the west edge of the study area is presumed to only contain water during the rainy season of winter.

Reptiles

Most reptiles prefer a variety of habitats in which to forage; they live in small burrows, which they also use as a refuge from differing ambient temperatures and predator avoidance. Notably, vegetation characteristics contribute to the possible diversity of reptiles in an area. The disking practices on the study area provides low suitable habitat for reptile species. One reptile, common side-blotched lizard was observed during the field survey.

Birds

The database queries showed there were ten special-status bird species identified as occurring in the vicinity of the project area. This included nine species that are either listed as endangered or threatened under ESA, CESA or designated as SSC. Of these species, none were observed on, or flying over, the site during biological survey in 2019. Six bird species were detected visually and/or aurally and include Anna's hummingbird, Brewer's blackbird, killdeer, California quail, Eurasian collared dove, and black-necked stilt. None of these species are listed as special status and no active bird nests were observed during the site visits. One bird species, burrowing owl, has some potential to occur on the southerly area of the project parcel approximately 700 feet from the southern boundary of the composting facility. This area also could support nesting or migratory birds. Swainson's hawk is recorded nesting within 4 miles of the project site but is not expected to occur within the study area. The study area and surrounding locations does not contain any trees that would be used for nesting or roosting, and the immediately surrounding areas provide very low-quality foraging habitat.

Burrowing Owl

Burrowing owl is a USFWS bird of conservation concern and a California Species of Special Concern (SSC). The CNDDDB includes two occurrences of burrowing owl between 2.0 and 3.0 miles northeast of the project site. Burrowing owls have a relatively wide-ranging distribution throughout the west and in California they are found year-round in open, dry grassland and desert habitats, and grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Burrowing owls preferred habitat is typified by short, sparse vegetation with few shrubs, level to gentle topography, and well-drained soils. In California, burrowing owls most commonly live in burrows created by California ground squirrels (*Spermophilus beecheyi*). Owls also may occur in human-altered landscapes such as agricultural areas, ruderal grassy fields, vacant lots, and pastures if the vegetation structure is suitable (i.e., open and sparse); useable burrows are available; and foraging habitat occurs in close proximity. Debris piles, rip rap, culverts, and pipes can also be used for nesting and roosting.

The project site was surveyed and analyzed for presence of suitable habitat for burrowing owl. The majority of the project parcel, approximately 99.5 acres provides unsuitable habitat, but approximately 0.5 acres of marginally suitable foraging habitat for this species exists in the southerly area of the project parcel, approximately 700 feet from the composting facility. This area has not been disturbed over the recent years after CDFW installed two artificial burrowing owl burrows. This area was surveyed, and one of the two artificial burrows was completely blocked with dirt and was subsequently compacted and blocked the burrow from potential use. The second artificial burrow was open at the surface but became narrow inside due to accumulation of dirt. No burrowing owl sign was observed at either artificial burrow location and these areas are considered to have limited nesting potential.

Two additional suitable size burrows at least 3-inches in diameter were observed. One was on the edge of the project site near the fence line to the existing plant perimeter and the second was along the bank of a sump within the Synagro plant in the north. No observations of burrowing owl sign (pellets and whitewash) was observed at either location and these areas are not considered currently active with burrowing owl.

Swainson's Hawk

The Swainson's hawk (SWHA) is listed as threatened under CESA as a State threatened species. In California, Swainson's hawk generally nests in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and the Mojave Desert. Swainson's Hawk breeds in riparian areas, stands of trees in agricultural environments, oak savannah, and juniper-sage flats. In the San Joaquin Valley, it nests in riparian areas and in isolated tree clusters, often near rural residences or other areas with some human disturbance. Alfalfa fields are the favored foraging areas of Swainson's hawk in the Central Valley, but the species also forages in undisturbed grasslands, fallow agricultural fields, and some row crops.

A reconnaissance-level survey for potential Swainson's hawk nests within 0.5-mile of the project site and review of SWHA historic nesting areas (revealing one nest site) was conducted during the May 2019 survey. During the survey, suitable nesting habitat was not present within the study area. Surrounding properties, with the exception of viewing from public roads in the vicinity, were not accessible. No Swainson's hawk nests were observed within ½ mile of the study area during the survey conducted. The historic nest site was observed from the road and no nest or nesting Swainson's hawk was observed within the vicinity. No additional suitable Swainson's hawk nesting habitat was observed within 4 miles of the project site and the species was not observed. Swainson's hawk is not expected to occur due to the lack of nesting, roosting, and foraging habitat.

Mammals

Disked fields generally have reduced habitat value for most species but can be utilized to a limited extent by mammalian predators such as coyote (*Canis latrans*) and foxes (*Vulpes* spp.). The value of foraging habitat, however, is dependent on the availability of suitable prey species. Because the study area had been disked, and is disked approximately twice a year, the site provides little habitat for small mammal species such as house mice, deer mice, voles, and harvest mouse. This further lowers the habitat value for mammalian predators. Although no mammal species or their sign (i.e., track, scat, dens/burrows, prey remains) were observed during the survey, one special status mammal species, San Joaquin kit fox, has the potential to occur. The San Joaquin kit fox is federally listed as endangered and State listed as threatened and is discussed in additional detail immediately below.

San Joaquin Kit Fox

The San Joaquin kit fox (SJKF) has a wide year-round range and is located within the arid and semi-arid regions of the San Joaquin and surrounding valleys. SJKF also is found in lower elevations of the Sierra Nevada foothills and Coast Ranges from northern Santa Barbara and Ventura Counties north to Contra Costa and San Joaquin Counties. SJKF are mostly associated with annual grasslands consisting of with brome grasses, fescue, wild oats, barley, and filaree.

The project site is considered to be within the range of SJKF. The four-quadrangle CNDDDB query yielded occurrences of this species within 5.0 miles of the study area. Surveys for SJKF dens in the study area were conducted in May 2019. During the survey, one burrow, appearing to meet the minimum size criterion (four inches) for SJKF, was identified in the northern area of the plant within the study area but it could not be observed up close to verify and was observed using binoculars. No SJKF sign was observed. Given the relative scarcity of prey species within the project site and due to the disking of the remaining study area, SJKF is considered to have low potential to occur.

Additionally, these activities result in an extremely low or non-existent prey base. The use of rodenticides to control small mammals in the adjacent photovoltaic property would further limit the prey base for kit foxes and their presence within the study area. In addition, based on the isolation of the project site within the confines of the existing plant to the north and the photovoltaic array to the east, west and south, SJKF likely use the roads and more open spaces around these areas as movement between higher quality foraging and denning habitat within the region.

Wetlands and Jurisdictional Waters of the United States

The National Wetlands Inventory (NWI) assessment and review of mapping for potential jurisdictional waters showed there are no waterways or drainages within or immediately adjacent to the study area that would be subject to regulatory agency jurisdiction. Two features, a freshwater emergent wetland, and a freshwater pond feature are mapped off site, approximately 0.36 miles to the east, and approximately 0.21 miles to the south, respectively. Both features are separated from the project site by the existing solar array farm.

Within the project site, there is one small low-lying depression in the southwest project parcel approximately 700 feet from the existing composting facility. This depressional area appears to capture water after rain events. This is a topographical depression that has no connection to any other waters and may pond for a short duration only. The depression is normally barren during the dry season and is disked over annually or biannually as is the rest of the project parcel. At the time of the survey, fivehook bassia (*Bassia hyssopifolia*), a non-native upland plant species, was growing around the perimeter. No hydrophytic vegetation indicating the presence of a wetland was present.

Historic aerial images of the survey area from May 1994 to October of 2016 were reviewed to determine the historical context of the depression. Images show that the site has been routinely disked and is heavily disturbed. It should be noted, it is unclear if the depression was present during the entire time or if it was potentially created by use as a turnaround point for an access road. Therefore, although the depression holds water for some duration following storm events, due to the lack of hydrophytic vegetation, and lack of connection to any other waters, this feature does not meet the definition of waters of the United States or state and would not be considered jurisdictional to the USACE, RWQCB, or CDFW.

4.4.3 Regulatory Setting

The CDFG and USFWS lists Threatened and Endangered taxa (e.g., species, subspecies or variety) with the potential to occur or known occurrence in the areas surrounding the proposed project area. The electronic Inventory of Rare and Endangered Vascular Plants of CNPS and the CNDDDB identify special-status plants, wildlife, and habitats known to occur in the vicinity of the proposed project site.

Federal

The Federal Endangered Species Act of 1973 (FESA)

The FESA of 1973 (50 SFR 17) provides legislation to protect plant and animal taxa considered at risk of extinction and classified as either threatened or endangered. Section 9 of the FESA prohibits

any person or entity from the “taking” of any endangered fish or wildlife species. Impacts to listed species resulting from project implementation would require the responsible agency or individual to consult the USFWS. Formal consultations must take place with the USFWS pursuant to Sections 7 and 10 of the FESA, with the USFWS then making a determination as to the extent of impact to a particular species. If the USFWS determines that impacts to a species would likely occur, then alternatives and measures to avoid or reduce impacts must be identified.

Section 4 requires Federal agencies to, among other things, prepare recovery plans for newly listed species unless USFWS determines such a plan would not promote the conservation of the species.

Section 7 requires Federal agencies, in consultation with, and with the assistance of the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. The USFWS and National Marine Fisheries Service (NMFS) share responsibilities for administering FESA. Regulations governing interagency cooperation under Section 7 are found at 50 CFR Part 402. The opinion issued at the conclusion of consultation will include a statement authorizing a take that may occur incidental to an otherwise legal activity.

Section 9 lists those actions that are prohibited under FESA. Take of a species listed in accordance with FESA is prohibited. Section 9 of FESA prohibits take (i.e., to harass, harm, pursue, hunt, wound, kill, etc.) of listed species of fish, wildlife, and plants without special exemption. “Harm” is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or shelter. “Harass” is further defined as actions that create the likelihood of injury to listed species to an extent as significantly disrupt normal behavior patterns which include, but not limited to, breeding, feeding, and shelter.

Section 10 provides a means whereby a non-Federal action with a potential to result in the take of a listed species could be allowed under an incidental take permit. Application procedures are found at 50 CFR Parts 13 and 17 for species under the jurisdiction of USFWS and 50 CFR Parts 217, 220, and 222 for species under the jurisdiction of NMFS.

San Joaquin Valley Upland Species Recovery Plan

The San Joaquin Valley Upland Species Recovery Plan (Upland Species Recovery Plan) covers 34 species of plants and animals that occur in the San Joaquin Valley. The Upland Species Recovery Plan is a was written by the USFWS in collaboration with individuals, local, state, and federal agencies, and covers a total of 34 species of plants and animals in the San Joaquin Valley. Of the 34 species, 11 listed species are listed species and are comprised the following.

Five plant species are listed as endangered under FESA:

- California jewelflower (*Caulanthus californicus*),
- Palmate-bracted bird’s-beak (*Cordylanthus palmatus*),
- Kern mallow (*Eremalche parryi* ssp. *kernensis*),

- San Joaquin woolly-threads (*Lembertia congdonii*), and
- Bakersfield cactus (*Opuntia basilaris* var. *treleasei*);

Five animal species are listed as endangered:

- Giant kangaroo rat (*Dipodomys ingens*),
- Fresno kangaroo rat (*Dipodomys nitratooides exilis*),
- Tipton kangaroo rat (*Dipodomys nitratooides nitratooides*),
- Blunt-nosed leopard lizard (*Gambelia silus*), and
- San Joaquin kit fox (*Vulpes macrotis mutica*).

One plant species is listed as threatened:

- Hoover's woolly-star (*Eriastrum hooveri*); and

Twenty-three plant and animal species are listed as candidates or species of concern are as follows:

- Lesser saltscale (*Atriplex minuscula*),
- Bakersfield smallscale (*Atriplex tularensis*),
- Lost Hills saltbush (*Atriplex vallicola*),
- Vasek's clarkia (*Clarkia tembloriensis* Vasek ssp. *calientensis*),
- Temblor buckwheat (*Eriogonum temblorense*),
- Tejon poppy (*Eschscholzia lemmonii* ssp. *kernensis*),
- Diamond-petaled California poppy (*Eschscholzia rhombipetala*),
- Comanche Point layia (*Layia leucopappa*),
- Munz's tidy-tips (*Layia munzii*),
- Jared's peppergrass (*Lepidium jaredii*),
- Merced monardella (*Monardella leucocephala*),
- Merced phacelia (*Phacelia ciliata* var. *opaca*), and
- Oil neststraw (*Stylocline citroleum*).
- Ciervo aegialian scarab beetle (*Aegialia concinna*),
- San Joaquin dune beetle (*Coelus gracilis*),
- Doyen's dune weevil (*Trigonoscuta* sp.),
- San Joaquin antelope squirrel (*Ammospermophilus nelsoni*),
- Short-nosed kangaroo rat (*Dipodomys nitratooides brevinasus*),
- Riparian woodrat (*Neotoma fuscipes riparia*),
- Tulare grasshopper mouse (*Onychomys torridus tularensis*),

- Buena Vista Lake shrew (*Sorex ornatus relictus*),
- Riparian brush rabbit (*Sylvilagus bachmani riparius*), and
- San Joaquin Le Conte's thrasher (*Toxostoma lecontei lecontei*).

The ultimate goal of this recovery plan is to delist the 11 endangered and threatened species and ensure the long-term conservation of the 23 candidates and species of concern. An interim goal is to reclassify the endangered species to threatened status. USFWS is responsible for implementation of the Upland Species Recovery Plan (USFWS, 1998).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, domestically implements a series of treaties between the United States and Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds; the act provides that it shall be unlawful, except as permitted by regulations, "to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird" (U.S. Code Title 16, Section 703). The current list of species protected by the MBTA includes several hundred species and essentially includes all native birds. Permits for take of nongame migratory birds can be issued only for specific activities, such as scientific collecting, rehabilitation, propagation, education, taxidermy, and protection of human health and safety and personal property.

Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668, enacted by 54 Stat. 250)

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 protects bald and golden eagles by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act. Take of bald and golden eagles is defined as follows: "disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle; (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or, (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior" (72 FR 31132; 50 CFR 22.3).

On November 10, 2009, USFWS implemented new rules (74 FR 46835) governing the "take" of golden and bald eagles. The rules were released under the existing BGEPA which has been the primary regulatory protection for unlisted eagle populations since 1940. All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by the USFWS under this act.

A programmatic permit would be available to industries or agencies undertaking activities that may disturb or otherwise take eagles on an ongoing operational basis. The USFWS has defined programmatic take as "take that (1) is recurring, but not caused solely by indirect effects, and (2) occurs over the long term and/or in a location or locations that cannot be specifically identified." The second criterion is the key factor that distinguishes programmatic take from any other take that has indirect effects that continue to cause take after the initial action.

In April 2012, a proposed rule change was published by the USFWS regarding take permits for golden eagles that would extend the maximum allowable permit life of a programmatic take permit from 5 to 30 years. The rule would also increase the associated fees to cover the actual costs of processing the permit application. The USFWS is studying the proposal pursuant to the National Environmental Policy Act (NEPA).

State

California Environmental Quality Act (CEQA) (Public Resource Code Section 21000 et seq.)

The California Environmental Quality Act (CEQA) was adopted in 1970 and applies to actions directly undertaken, financed, or permitted by State and local lead agencies. CEQA requires that agencies inform themselves about the environmental effects of their proposed actions, consider all relevant information, provide the public an opportunity to comment on the environmental issues, and avoid or reduce potential environmental harm whenever feasible. CEQA establishes State policy to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures. Regulations for implementation are found in the CEQA Guidelines published by the Resources Agency. These guidelines establish an overall process for the environmental evaluation of projects.

Section 15380

Although threatened and endangered species are protected by specific federal and State statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in CEQA primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has not been listed by either USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected, if warranted. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities. Although natural communities do not at present have legal protection of any kind, CEQA calls for an assessment of whether any such resources would be affected and requires findings of significance if there would be substantial losses. Natural communities listed by CNDDDB as sensitive are considered by CDFW to be significant resources and fall under the CEQA Guidelines for addressing impacts. Local planning documents such as general plans often identify these resources as well.

California Endangered Species Act (CESA)

California has a parallel mandate to the FESA, which is the CESA of 1984 and the California Native Plant Protection Act of 1977. These laws regulate the listing and take of plant and animal species designated as endangered, threatened or rare. The State of California also lists Species of Special Concern based on limited distribution, declining populations, diminishing habitat or unusual scientific, recreational or educational value. Under state law, the CDFG is empowered to review projects for their potential to impact listed species and their habitats.

Fully Protected Species.

The State of California first began to designate species as “Fully Protected” prior to the creation of the CESA. Lists of Fully Protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, mammals, amphibians and reptiles, birds, and mammals. Most Fully Protected species have since been listed as threatened or endangered under the CESA and/or ESA. The regulations that implement the Fully Protected Species Statute (Fish and Game Code Sections 3511, 4700, 5050, 5515) provide that Fully Protected species may not be taken or possessed at any time. Furthermore, the statute prohibits any State agency from issuing incidental take permits for Fully Protected species, except for scientific research or relocation of the bird species for the protection of livestock pursuant to Section 670.7 of the California Code of Regulations or Section 2835 of the Fish and Game Code.

Fish and Game Code

The CDFW is responsible for conserving, protecting and managing California’s fish, wildlife and native plant resources. Protected species may not be “taken” or possessed without a permit from the Fish and Game Commission and/or the CDFW. Information on these species can be found within Section 3511 (birds), Section 4700 (mammals), Section 5050 (reptiles and amphibians) and Section 5515 (fish) of the Fish and Game Code. It is unlawful to take the nest or eggs of any bird, or to take any bird of prey per Section 3503 of the Fish and Game Code.

Several sections of the CFGC are applicable to analysis of biological resource impacts that may be associated with the project, which are summarized in the following sections.

Section 1580

Declares the policy of the State is to protect threatened or endangered native plants, wildlife, aquatic organisms or specialized habitat types, both terrestrial and non-marine aquatic, or large, heterogeneous natural gene pools for the future use of mankind through the establishment of ecological reserves.

Sections 1600 through 1616

Under these sections of the CFGC, the project proponent is required to notify CDFW prior to any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Pursuant to the code, a “stream” is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that supports or has supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial watercourses valuable to fish and wildlife are subject to CDFW jurisdiction. CDFW also has jurisdiction over dry washes that carry water during storm events.

Preliminary notification and project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resource. These modifications are

formalized in a Streambed Alteration Agreement, which becomes part of the plans, specifications, and bid documents for the project.

Sections 1930–1933

Established the Significant Natural Areas Program and declared it to be administered by the CDFW because areas containing diverse ecological and geological characteristics are vital to the continual health and well-being of the State's citizens and natural resources. The CDFW is responsible for obtaining access to the most recent information with respect to natural resources by maintaining, expanding, and keeping a current data management system (the CNDDDB), designed to document information on these resources. This data is required to be made available to interested parties on request, and costs are to be shared by all who use the data management system. The State's most significant natural areas are to be designated and, after consultation with Federal, State, and local agencies; educational institutions; civic and public interest organizations; private organizations; landowners; and other private individuals, periodic reports regarding the most significant natural areas are to be prepared. The CDFW is required to maintain and perpetuate these significant natural areas for present and future generations in the most feasible manner. The CFGC also requires that the CDFW coordinate services with Federal, State, local and private interests wishing to aid in the maintenance and perpetuation of significant natural areas.

Sections 2080 and 2081

Section 2080 of the CFGC states that “No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act [NPPA], or the California Desert Native Plants Act.” Pursuant to Section 2080.1 or 2081 of the code, CDFW may authorize individuals or public agencies to import, export, take, or possess state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or memoranda of understanding if the take is incidental to an otherwise lawful activity, impacts of the authorized take are minimized and fully mitigated, the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and the project proponent ensures adequate funding to implement the measures required by CDFW, which makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

Sections 3503, 3503.5, 3513, and 3800

Under these sections of the CFGC, the project proponent is not allowed to conduct activities that would result in the taking, possessing, or destroying of any birds of prey or their nests or eggs; the taking or possessing of any migratory nongame bird as designated in the MBTA; the taking, possessing, or needlessly destroying of the nest or eggs of any bird; or the taking of any nongame bird pursuant to California Fish and Game Code Section 3800.

Sections 3511, 4700, 5050, and 5515

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the CFGC. These statutes prohibit take or possession of fully protected species. CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species.

Sections 4000 through 4003.

Under Section 4000 of the CFGC, it is unlawful to conduct activities that would result in the taking, possessing, or destroying of any fur-bearing mammals, including kit foxes, without prior authorization from the CDFW.

California Code of Regulations Title 14, Section 15000 et seq.

The definition of what constitutes a significant impact to the environment, as well as a discussion of the necessary documentation needed for each impact, is outlined in 14 CCR Section 15000 et seq. In addition to the policies declared by the Legislature concerning environmental protection and administration of CEQA in Sections 21000, 21001, 21002, and 21002.1 of the Public Resources Code (PRC), this portion of the CCR prescribes the regulations to be followed by all State and local agencies in implementing CEQA.

Native Plant Protection Act (California Fish and Game Code Sections 1900–1913)

California's Native Plant Protection Act (NPPA) requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the NPPA prohibit the taking of listed plants from the wild and require notification of CDFW at least ten days in advance of any change in land use. This allows CDFW to salvage listed plant species that otherwise would be destroyed. The project proponent is required to conduct botanical inventories and consult with CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

Regional Water Quality Control Board

Under CWA Section 401, the RWQCB must certify that actions receiving authorization under CWA Section 404 also meet state water quality standards. The RWQCB also regulates waters of the state under the Porter-Cologne Act Water Quality Control Act. The RWQCB requires projects to avoid impacts to wetlands if feasible and requires that projects do not result in a net loss of wetland acreage or a net loss of wetland function and values. The RWQCB may require compensatory mitigation for impacts to wetlands and/or waters of the state, which may include waters deemed 'isolated' or not subject to Section 404 jurisdiction, under the Solid Waste Agency of Northern Cook County (SWANCC) legal decision. The thrust of the SWANCC legal decision is that isolated, non-navigable, and intrastate waters are not "waters of the United States" subject to USACE jurisdiction under the Clean Water Act. Filling, dredging, or excavation of isolated waters may constitute a discharge of waste to waters of the state and if so, then prospective dischargers are required to file a Report of Waste Discharge to obtain Waste Water Discharge Requirements as authorization for that fill or waiver thereof from the RWQCB.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, waters of the state fall under the jurisdiction of the appropriate RWQCB. Under the act, the RWQCB must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters must meet waste discharge requirements of the RWQCB, which may be issued in addition to a water quality certification or waiver under CWA Section 401.

Regional

Kern County Draft Valley Floor Habitat Conservation Plan

The project site is within the management area of the Draft Kern County Valley Floor Habitat Conservation Plan (KCVFHCP). The Draft Kern County Valley Floor Habitat Conservation Plan area occurs in the western portion of Kern County except for areas at the base of the Tehachapi Mountains. The area is limited to the southern San Joaquin Valley floor of Kern County and includes the project site.

The KCVFHCP is a pending Habitat Conservation Plan pursuant to the FESA covering over 3,110 square miles in Kern County with a purpose of creating a comprehensive strategy to conserve and protect the San Joaquin kit fox, blunt-nosed leopard lizard, and 23 other sensitive species. In addition, this HCP provides a streamlined program for complying with the requirements of the CESA and FESA. The HCP has not yet been approved by the USFWS, CDFW, or the Kern County Board of Supervisors.

If and when completed, incidental take permits for 13 covered species would be issued to participating local jurisdictions and State agencies. This incidental take authorization cannot be implemented, however, until the local governments complete the application for incidental take permits and receive approval from State and federal wildlife agencies.

Local

Kern County General Plan

The Kern County General Plan identifies the federal, State, and local statutes, ordinances, and policies that govern the conservation of biological resources that must be considered by Kern County during the decision-making process for any project that could affect biological resources.

The policies, goals, and implementation measures in the Kern County General Plan relevant to biological resources that are applicable to the project are provided below. The Kern County General Plan also contains additional policies, goals, and implementation measures that are more general in nature. Therefore, they are not listed below, but, as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

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

The Land Use, Open Space, and Conservation Element of the Kern County General Plan states that the element provides for a variety of land uses for future economic growth while also assuring the conservation of County's agricultural, natural, and resource attributes. The General Plan, **Section 1.10.5, Chapter 1. Land Use, Open Space, and Conservation Element**. General Goal 1, provides goals, policies, and implementation measures that apply to all types of projects within the County's discretion while maintaining the preservation of threatened and endangered species.

1.10 General Provisions

Section 1.10.5 Threatened and Endangered Species

Goal

- **Goal 1:** Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

Policies

- **Policy 27.** Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.
- **Policy 28.** 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 29.** 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 30.** The County will promote public awareness of endangered species laws to help educate property owners and the development community of local, State, and federal programs concerning endangered species conservation issues.
- **Policy 31.** 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 32.** 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.

Implementation Measures

- **Implementation Measure Q.** Discretionary projects shall consider effects to biological resources as required by the California Environmental Quality Act.
- **Implementation Measure R.** Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to the California Environmental Quality Act.

- **Implementation Measure S.** Pursue the development and implementation of conservation programs with State and federal wildlife agencies for property owners desiring streamlined endangered species mitigation programs.

Southern Kern Industrial Center Specific Plan (SKICSP)

The project site is located within the SKICSP, which was most recently amended June 22, 2021 (SPA 159 Map 500). The purpose of the SKICSP is to be used as a planning tool to closely define the planning criteria of the specific plan area and to define the nature and extent of growth and to ensure orderly development. The SKICSP was designed to achieve three primary goals: implement the Kern County General Plan; establish of development standards; and guide for the planned development of the SKIC.

The SKICSP includes a total of 744 acres and is intended to be the primary growth and development implementation tool for the defined area. The SKICSP is intended to provide for the orderly development of the plan area and address particular issues and concerns unique to the area and sites, such as the proposed project, within. The SKICSP is internally consistent with the Kern County General Plan and incorporates the County-wide General Plan goals and policies, and by addressing the mandatory General Plan elements. Furthermore, the land use designations within SKICSP are heavy industrial focused.

There are no specific biological-related policies and measures contained in the SKICSP Plan that are applicable to the project due to the intended heavy-industrial land use designation of the site. In Kern County, specific plans are used to implement goals, objectives, and policies of the General Plan in a more detailed and refined manner unique to a smaller area of the County. Since there are no applicable goals, policies, or implementation measures within the SKICSP, refer to the applicable policies, goals, and implementation measures of the Kern County General Plan above.

Chapter 19.81, Dark Skies Ordinance (Outdoor Lighting)

In November 2011, Kern County approved a Dark Skies Ordinance. The purpose of this ordinance is to maintain the existing character of Kern County by requiring a minimal approach to outdoor lighting, recognizing that excessive illumination can create a glow that may obscure the night sky, and that excessive illumination or glare may constitute a nuisance. The ordinance provides requirements for outdoor lighting within specified unincorporated areas of Kern County in order to accomplish the following objectives:

- Objective 1: Encourage a safe, secure, and less light-oriented night-time environment for residents, businesses and visitors.
- Objective 2: Promote a reduction in unnecessary light intensity and glare, and to reduce light spillover onto adjacent properties.
- Objective 3: Protect the ability to view the night sky by restricting unnecessary upward projections of light.
- Objective 4: Promote a reduction in the generation of greenhouse gases by reducing wasted electricity that can result from excessive or unwanted outdoor lighting.

4.4.4 Impacts and Mitigation Measures

Methodology

This section addresses the anticipated impacts (direct, indirect, and cumulative) to biological resources that would result from implementation of the proposed program. The potential impacts associated with the proposed project are evaluated on a qualitative and quantitative basis through a comparison of the anticipated project effects on biological habitat. The significance determinations for proposed or potential impacts follow the thresholds provided in the California Environmental Quality Act Guidelines Section 15064(b) and Appendix G Environmental Checklist. In addition, the evaluation of proposed project impacts as based on professional judgment, analysis of the County's biological resources polices and adopted Kern County thresholds in the Kern County CEQA Implementation Document. The evaluation of the proposed project's impacts using the thresholds of significance presented is organized by the resource potentially affected: special-status species, riparian and sensitive vegetation communities, jurisdictional wetlands and waters, and wildlife movement. The change in the land use is significant if the effects described below occur.

Biological Reconnaissance

A field survey and habitat assessment survey was conducted on the project site on May 14, 2019 with a subsequent Biological Resources Technical Report prepared on August 3, 2020. The pedestrian survey provided 100% visual coverage of the accessible areas. All biological resources and potential biological constraints were identified and inventoried. Potential special-status biological resources identified during the survey were mapped using ESRI Collector Mapping System for inclusion in the report figures. All plant and wildlife species observed during the site visit were recorded. Plants were detected and identified through direct sight. Wildlife species were detected by sight, calls, tracks, scat, or other signs. The potential for special-status plant and wildlife species to occur was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distribution in the area.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in CEQA Guidelines Appendix G, to determine if a project could potentially have a significant adverse effect on biological resources.

A project would have a significant adverse effect on biological resources if it:

- a. Has 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 CDFW or the USFWS;
- b. Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or the USFWS;

- c. Has 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. Interferes 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. Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- f. Conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The lead agency determined in the NOP/IS (see Appendix A) that the following environmental issues areas resulted in no impact and were scoped out of requiring further review in this EIR. Please refer to Appendix A of this Draft EIR for a copy of the NOP/IS and additional information regarding the following impacts:

- g. The project would 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 CDFG or USFWS.

According to the State of California Wildlife Conservation Board, riparian habitats are found along rivers, creeks, streams, and lakes and generally consist of plant communities of woody vegetation. The proposed project site is not located near any rivers, creeks, streams and lakes. The nearest lake, Buena Vista Lake, is located 3.75 miles northwest of the project site. No riparian habitat is located on the project site. In addition, the existing project facility has been in active operation since 2006 and thus the project site is considered substantially disturbed and mostly developed therefore, no further analysis is warranted.

- h. The project would 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.

The project site does not contain any features identified in wetland categories that appear on the USFWS National Wetlands Inventory mapping. No potentially jurisdictional wetlands or waters occur within the study area. Therefore, the proposed project would not result in any alteration to any area that would impact any jurisdictional features. As previously stated, a low-lying topographical depression occurs in the southern portion of the study area approximately 700 feet south of the composting facility. This feature has no connection to any other waters, ponds for short durations after a storm event, and does not support hydrophytic vegetation. Thus, this feature would not be considered jurisdictional based on USACE, RWQCB, or CDFW determination guidelines. Therefore, the proposed project would not result in the disturbance to any wetland. No impacts would occur, and no further analysis is warranted.

- i. The project would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The proposed project is required to comply with all requirements in the Kern County General Plan and Kern County Ordinance Codes, including Oak Tree Conservation policies. There are no

oak trees present on the project site. The project site has been in operation since 2006, is heavily disturbed, and has no native habitat, trees, or any other biological resources that are protected by local policies. Therefore, the implementation of the proposed project would not conflict with any local policies or ordinances that protect biological resources. No impacts would occur, and no further analysis is warranted.

Project Impacts and Mitigation Measures

Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies or regulations, or by the CDFW or USFWS.

Special Status Plants

The project site consists of an existing 44-acre composting facility and a 56-acre area that is undeveloped, has a history of use for agricultural production, but is now routinely disked. The 56 acres is heavily disturbed through vegetation and weed management by disking the area two times a year. According to the Biological Resources Technical Report, out of 11 special-status plant species that occur in the region, no plants were determined to potentially exist within the overall 100 acre permitted site that includes both the disturbed disked areas and the composting facility. Vegetation in these areas is characterized by ruderal, weedy, non-native, and often invasive species. The majority of these areas contain limited, if any, native vegetation. Because of the sparse ground cover and varieties of plants, the vegetative cover presents very low ecological and habitat value. Therefore, due to ongoing site maintenance, the existing active composting facility and overall lack of native species, no special-status plant species or suitable native habitat are present in the project parcel. Therefore, impacts to special-status plant species or their habitat would occur and mitigation is not required.

Special Status Wildlife Species

The Biological Resources Technical Report evaluated the project parcel and surrounding study area buffer. The evaluation was focused for the potential presence of the 23 special-status wildlife species that have the potential to occur in the vicinity as reported in the CNDDDB and USFWS databases. The potential for the presence of each species was determined based on information gathered during the field reconnaissance, known habitat preferences of the species, and known species distributions. No wildlife species listed, or species proposed for listing as rare, threatened, or endangered by either CDFW or USFWS were observed or detected within the study area. Two species, burrowing owl and the San Joaquin kit fox were determined to have a medium potential to occur within the project area.

San Joaquin Kit Fox

The project site provides marginally suitable denning and foraging habitat for SJKF and one suitable size burrow was observed during the survey. Suitable dens, or refugia, are considered important for kit fox as they provide protection from possible predation by coyotes. No evidence; however, of kit fox dens or kit fox sign (e.g., tracks, or scat, prey remains, etc.) were observed on the project parcel or in the study area. The CNDDDB; however, does indicate SJKF has historically occurred within the project region but due to unsuitable habitat it is unlikely that kit fox would reside on the project site. The project site also is highly limited for foraging due to the lack of vegetative covers, routine disturbance, lack of or marginal native habitat, and limited presence of prey species. Therefore, San

Joaquin kit fox is considered to have a low potential to occur within the project site and overall study area.

Although no sign of kit fox was observed during the survey in 2019 and the species is unlikely to occur on-site, a small potential exists that the species could use the site on rare occasions. This includes the potential for movement or dispersal through the project parcel and for travel between the higher quality habitats available elsewhere in the region. While considered unlikely, project activities could result in harm or injury to individual kit foxes, if present. This would be considered a significant impacts under CEQA and would constitute take under FESA and CESA and mitigation would be required.

Potential impacts to SJKF and other species would be avoided through impact minimization measures including preconstruction surveys to determine presence, education and environmental awareness trainings, general avoidance measures, and relocation if needed. These measures would be implemented to reduce potential impacts to the species discussed and are described in detail in Mitigation Measures **MM 4.4-1** through **MM 4.4-4**, and **MM 4.4-6**, below. In addition, Mitigation Measure **MM 4.9-2**, (see **Section 4.9, Hazards and Hazardous Materials**) is proposed, which includes monitoring and worker training regarding the use of agency-approved herbicides. Training involving the use of substances that are non-toxic to small mammals such as the San Joaquin kit fox and their prey sources would further reduce impacts. With implementation of these mitigation measures, impacts to burrowing owl, Swainson's hawk, other nesting or migratory birds, blunt-nosed leopard lizard, American badger, and San Joaquin kit fox would be less than significant. Potential impacts to these species is discussed in additional detail below.

Burrowing Owl

Although two potentially suitable burrows and two artificial burrows of suitable size were observed during the survey of the project parcel, none of these burrows showed sign of burrowing owl use, and no burrowing owls were observed at these burrows. Nonetheless, burrowing owls have used the study area in the past due to the presence of the CDFW installed artificial burrows within the remnant vegetated area in the southwest portion of the study area. While this area is not proposed to be disturbed as part of the proposed project, there is potential for burrowing owl to be present and disturbed as a result of project construction. Marginal suitable foraging habitat for this species occurs throughout the site, and nesting could occur within available burrows in areas not regularly disturbed during land management practices. Although considered unlikely, depending on the timing of site improvement activities the proposed project could result in the loss of an active nest or nests if the species is present. Disturbance from improvements at the composting facility could result in the abandonment of an active nest(s) during that year's nesting season and the loss of individual burrowing owls within burrows. If owls are present and if improvements result in the loss of individual burrowing owls and/or active nests this would be considered significant and would be a violation of the California Fish and Game Code. Mitigation Measures **MM 4.4-1 through MM 4.4-4**, as discussed, provide generalized species protection and would serve to minimize impacts to the burrowing owl. Mitigation Measures **MM 4.4-7** and **MM 4.4-8** specifically addresses potential impacts to the burrowing owl and would reduce impacts to less than significant.

Swainson's Hawk

A reconnaissance-level nest survey conducted within the study area did not reveal any Swainson's hawk nests in the study area or within 0.5 mile of the site. CNDDDB includes one occurrence of a

nesting Swainson's hawk within 4.0 miles of the project site. The study area is nearly devoid of vegetation due to weed control and disking operations. The project site does not have any trees and therefore, contains no suitable nesting, and foraging habitat for the species is also extremely limited. Based on these factors, the proposed project is not anticipated to have any impact on Swainson's hawk. While, impacts to Swainson's hawk are anticipated to be less than significant even without mitigation, Mitigation Measures **MM 4.4-1 through MM 4.4-4** would provide protection to all species discussed including Swainson's hawk and would ensure impacts remain less than significant. Mitigation Measure **MM 4.4-5** specifically addresses potential impacts to Swainson's hawk and would reduce impacts to less than significant.

Blunt-Nosed Leopard Lizard

Blunt-nosed leopard lizard (BNLL) was not observed on the project site during the 2019 biological reconnaissance. The species prefers habitat consisting of sparsely vegetated alkali and desert scrub, including semiarid grasslands, alkali flats, and washes. Although the BNLL is unlikely to occur and areas proposed for improvements within the composting facility does not provide habitat, direct impacts to this species, if present, would include collision with vehicles accessing the site and facility, and general disturbance due to increased human activity if the species occurs in surrounding areas. The proposed project, however, would not result in any direct disturbance to any areas that represent suitable habitat to this species and project implementation would not result in permanent loss of habitat used by the BNLL. While, impacts are anticipated to be less than significant, Mitigation Measures **MM 4.4-1 through MM 4.4-4**, as discussed, provide generalized species protection and would serve to minimize impacts to the BNLL should they be present. Mitigation Measure **MM 4.4-9** specifically addresses potential impacts to the BNLL and would reduce impacts to less than significant.

American Badger

American badger was not observed on the project site during the 2019 biological reconnaissance. The species preferred habitat is grasslands, coastal scrub, agriculture, and pastures, especially with friable soils which are absent from the project site. Thus, the American badger is unlikely to occur. Areas proposed for improvements are within the overall 100-acre project site area heavily disturbed consisting of the composting facility or routinely disked fallow agricultural land. None of these areas are considered suitable habitat for the species. Thus, the proposed project would not result in disturbance of any areas suitable for the American badger or result in the permanent loss of habitat. The species may use the project area as a corridor between areas with suitable habitat, and direct impacts to the species, if present, could include occur during sire preparation of from collisions with vehicles. While impacts are anticipated to be less than significant and Mitigation Measures **MM 4.4-1 through MM 4.4-4** would provide generalized species protection, impacts may still occur. Mitigation Measure **MM 4.4-10** would be implemented and specifically addresses potential impacts to the species and would reduce impacts to less than significant.

Migratory Birds

Direct and indirect impacts to avian species may occur during project improvement, operations, and maintenance if birds collide with project facilities and equipment or become trapped in materials. This would include fencing, structures, machinery, heavy equipment, etc. Factors that determine the risk of avian collisions with man-made structures include the size, height, and specific attributes of structures (guy wires and lighting/light attraction). Other factors include siting in high-risk areas,

frequency of inclement weather, type of development, and the species at potential risk. Avian conflicts with project related activities could result in injury or mortality of avian species from electrocution, including in the case of power lines. Collisions with project facilities and equipment would be considered a potentially significant impact under CEQA.

Due to the lack of vegetative cover and the low potential for the project site to be used for foraging or nesting, impacts to avian species are anticipated to be less than significant. In order to ensure impacts area minimized, Mitigation Measures **MM 4.4-1 through MM 4.4-5** would provide species protection, including protections for avian species, and impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measure **MM 4.9-2** (see **Section 4.9, Hazards and Hazardous Materials** for full Mitigation Measure text).

MM 4.4-1: Prior to initiation of any site preparation and/or construction activities on the currently vacant 56 acres, the project proponent shall retain a qualified biologist who meets the qualifications of an authorized biologist as defined by U.S. Fish and Wildlife Service to oversee compliance with protection measures for all listed and other special-status wildlife species. The Lead Biologist will have oversight over implementation of all necessary avoidance and minimization efforts and will have the authority to stop construction activities, if any of the requirements associated with these measures are not being fulfilled. The following measures pertain to the Lead biologists on-site:

- a. The qualified biologist(s) shall have the right to halt activities that are in violation of the special-status species mitigation measures, as well as any regulatory permits from the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife, if applicable. Work shall proceed only after hazards to special-status species are removed and the species is no longer at risk, or at the qualified biologist's discretion.
- b. The qualified biologist(s) shall maintain a copy of applicable permits and biology-related plans on the project sites.
- c. The qualified biologist(s) shall have in their possession a copy of all mitigation measures while work is being conducted on the project sites.
- d. Prior to initiation of any site preparation and/or construction activities on the currently vacant 56 acres, contact information for the qualified biologist(s) shall be submitted to the Kern County Planning and Natural Resources Department.
- e. Individuals involved in biological monitoring shall be supervised by the qualified biologist(s) and shall have the appropriate experience to accomplish biological monitoring. Biological monitors shall comply with the above measures.

MM 4.4-2: Prior to the any site preparation and/or construction activities on the currently vacant 56 acres, and for the duration of construction activities on that acreage, all employees, contractors, or other person(s) working at the project site who are participating in construction activities at the project site shall attend an Environmental Awareness Training and Education Program (WEAP), developed and presented by a qualified biologist. The Worker Environmental

Awareness Training and Education Program will be developed and presented by a qualified biologist(s) or designee approved by the qualified biologist(s) and may be conducted in person or via videotape or other electronically recorded media.

Any personnel associated with construction that did not attend the initial Worker Environmental Awareness Training and Education Program shall attend a subsequent Worker Environmental Awareness Training and Education Program. Any employee responsible for the operations and maintenance or decommissioning of the project facilities shall also attend the Worker Environmental Awareness Training and Education Program prior to starting work on the project and on an annual basis.

On-site employees responsible for the operations and maintenance of expanded project facilities shall also attend the Worker Environmental Awareness Training and Education Program prior to operations or decommissioning. The Worker Environmental Awareness Training and Education Program will be developed and presented by a qualified biologist(s) or designee approved by the qualified biologist(s). The Worker Environmental Awareness Training and Education Program shall include the components described below:

- a. The Training Program shall include, but not be limited to, information on the life history of species including the, burrowing owl, Swainson's hawk, San Joaquin kit fox, American badger, Blunt-Nosed Leopard Lizard, as well as other wildlife, nesting birds, and plant species that may be encountered during construction activities, their legal protections, the definition of "take" under the Endangered Species Act, measures to protect the species, reporting requirements, specific measures that each worker shall employ to avoid take of wildlife species, and penalties for violation of the Act.
- b. To ensure employees and contractors understand their roles and responsibilities, training may be conducted in languages other than English.
- c. An acknowledgement form signed by each worker indicating that Environmental Awareness Training and Education Program has been completed would be kept on record;
- d. A sticker shall be placed on hard hats indicating that the worker has completed the Environmental Awareness Training and Education Program. Construction workers shall not be permitted to operate equipment within the construction areas unless they have attended the Environmental Awareness Training and Education Program and are wearing hard hats with the required sticker;
- e. A copy of the training transcript and/or training video, as well as a list of the names of all personnel who attended the Environmental Awareness Training and Education Program and copies of the signed acknowledgement forms shall be submitted to the Kern County Planning and Natural Resources Department; and
- f. The construction crews and contractor(s) shall be responsible for unauthorized impacts from construction activities to sensitive biological resources that are outside the areas defined as subject to impacts by project permits.

MM 4.4-3: During construction and site improvements on the undeveloped 56 acres, the project proponent shall implement the general avoidance and protective measures described below.

- a. Prior to conducting vegetation clearing or grading activities, a qualified biologist or biological monitor that has been approved by the qualified biologist shall perform preconstruction visual surveys of the area immediately prior to conducting these activities to ensure that no special-status animals are present. The qualified biologist or biological monitor shall monitor all initial construction and decommissioning ground-disturbing activities. A report of those activities shall be submitted to the Kern County Planning and Natural Resources Department within 30 days of completion of activities.
- b. Sensitive biological resources (e.g., special-status species or nesting birds, etc.) within proposed impact areas, shall be delineated with stakes and/or flagging prior to construction to avoid sensitive biological resources where possible. Construction-related activities outside of the planned impact areas shall be avoided.
- c. All vehicles will be directed to exercise caution when commuting within the project area. A 15-mile per hour speed limit will be enforced on unpaved roads.
- d. Project employees will be provided with written guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.
- e. A litter control program shall be instituted at the project site. All workers shall ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area are deposited in covered or closed trash containers. The trash containers shall be removed from the project area at the end of each working day.
- f. No canine or feline pets or firearms (except for federal, state, or local law enforcement officers and security personnel) shall be permitted on construction sites to avoid harassment, killing, or injuring of listed species.
- g. To prevent inadvertent entrapment of San Joaquin kit fox, American badgers, or other animals all excavated, steep-walled holes or trenches more than two feet deep shall be covered with plywood or similar materials at the close of each working day, or provided with one or more escape ramps constructed of earth fill or wooden planks that are no less than 12 inches wide and secured at the top and placed a minimum of every 100 feet within the open trench. Covered and non-covered holes or trenches shall be thoroughly inspected for trapped animals by a qualified biologist or their biological monitor at the beginning and end of each day. Immediately before such holes or trenches are filled, they shall again be thoroughly inspected by trained staff approved by the retained qualified biologist for trapped animals. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow for their escape. If a listed species is trapped, the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife, as appropriate for the species, and Kern County Planning and Natural Resources Department shall be contacted immediately.
- h. San Joaquin kit fox, burrowing owls, mammals, and nesting birds may use construction pipes, culverts, or similar structures for refuge or nesting. Therefore, all construction pipes, culverts,

- or similar structures with a diameter of 4 inches or more that are stored at the construction site for one or more overnight periods, shall be covered in such a way as to exclude wildlife from entry. If this is not possible, straight pipes shall be inspected for wildlife before moving or capping. Any pipes of this size that cannot be seen through completely must be covered if left overnight.
- i. If any such pipes are left overnight without being covered, shall be thoroughly inspected by a qualified biologist or the designated biological monitor for special-status wildlife or nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If an animal is discovered inside a pipe, that section of pipe shall not be moved until a qualified biologist has been consulted and the animal has either moved from the structure on its own accord or until the animal has been captured and relocated by a qualified biologist holding the appropriate handling permits from the resource agencies
 - j. All construction activities shall be confined within the project construction area, which may include temporary access roads, haul roads, and staging areas specifically designated and marked for these purposes. At no time shall equipment or personnel be allowed to adversely affect areas outside the project site.
 - k. No vehicle or equipment parked on the project sites shall be moved prior to inspecting the ground beneath the vehicle or equipment for the presence of wildlife. If present, the animal shall be left to move on its own.
 - l. Intentional killing or collection of any plant or wildlife species shall be prohibited.
 - m. Because dusk and dawn are often the times when listed species are most actively foraging, all construction activities will cease 0.5 hour before sunset and will not begin prior to 0.5 hour before sunrise. Except when necessary for driver or pedestrian safety, lighting of the project site by artificial lighting during nighttime hours is prohibited.
 - n. Tightly woven fiber netting or similar material shall be used for erosion control or other purposes at the project site to ensure that special-status species do not get trapped. This limitation will be communicated to the contractor through use of Special Provisions included in the bid solicitation package.
 - o. Use of rodenticides and herbicides at the project site shall be avoided to the maximum extent feasible. If use is unavoidable, rodenticides and/or herbicides shall be utilized in such a manner to prevent primary or secondary poisoning of special-status species and depletion of prey populations on which they depend. All uses of such compounds shall observe labels and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Pesticide Regulation, and other appropriate state and federal regulations as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service or California Department of Fish and Wildlife

MM 4.4-4: A pre-construction survey by a qualified biologist or monitor shall be conducted no more than 30 days and no less than 14 days prior to the commencement of any site preparation, ground disturbance, and/or construction activities in previously undeveloped areas of the project

site. If any evidence of occupation of that portion of the project site by listed or other special-status plant or animal species is observed, a buffer shall be established by a qualified biologist that results in sufficient avoidance to comply with applicable regulations. If sufficient avoidance cannot be established, the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be contacted for further guidance and consultation on additional measures. The project proponent or operator shall obtain any required permits from the appropriate wildlife agency. Copies of the pre-construction survey and results, as well as all permits and evidence of compliance with applicable regulations, shall be submitted to the Kern County Planning and Natural Resources Department.

No-disturbance buffer distances shall be established prior to the commencement of any site preparation and/or construction activities, in consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife, if any listed or other special status plant or animal species is observed as listed in Mitigation Measures **MM 4.4-5 through MM 4.4-10**.

MM 4.4-5: To mitigate for potential impacts to nesting birds, special-status birds including the Swainson's hawk and peregrine falcon, and birds protected under the Migratory Bird Treaty Act and California Fish and Game Code during construction, operation, and decommissioning activities, the following measures shall be implemented as part of the approval for a grading or building permit:

- a. During the avian nesting season (February 1–August 31), a qualified biologist shall conduct a preconstruction avian nesting survey no more than 7 days prior to initial vegetation clearing. Surveys need not be conducted for the entire project site at one time; they may be phased so that surveys occur within 7 days prior to clearing or disturbance in specific areas of the site. The surveying biologist must be qualified to determine the species, status, and nesting stage without causing intrusive disturbance. At no time shall the biologist be allowed to handle the nest or its eggs. The survey shall cover all reasonably potential nesting locations on and within 500 feet of the project site including ground nesting where species, such as California horned lark and killdeer might nest all shrubs that could support nests, and suitable raptor nest sites such as nearby trees, windrows and power poles. Swainson's hawk nest surveys will be conducted prior to construction according to the *Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California* (California Department of Fish and Wildlife, 2010) and within a 5-mile buffer around the project site. Access shall be granted on private offsite properties prior to conducting surveys on private land. If access is not obtainable, the biologist shall survey these areas from the nearest vantage point with use of spotting scopes or binoculars.
- b. If construction is scheduled to occur during the non-nesting season (September 1–February 1), no preconstruction surveys or additional measures are required for non-listed avian species.
- c. If construction begins in the non-nesting season and proceeds continuously into the nesting season within any particular construction or decommissioning area, no surveys are required for non-listed avian species so long as all suitable nesting sites have been cleared from active construction/decommissioning areas.
- d. If active nests are found, a 300-foot no-disturbance buffer shall be created around passerine species' nests unless adjusted by the qualified biologist based on the needs and sensitivities of

individual species, a 0.5-mile no-disturbance buffer for Swainson's hawk nest, and a 500-foot no-disturbance buffer around other raptor species' nests (or a suitable distance otherwise determined in consultation with California Department of Fish and Wildlife). Any nest of a federal- or State-listed bird species shall require consultation with the appropriate agency (United States Fish and Wildlife Service or the California Department of Fish and Wildlife) to determine the appropriate buffer distance surrounding the nest to provide adequate nest protection. These buffers shall remain in effect until a qualified wildlife biologist has determined that the birds have fledged, or the proposed project component(s) have been redesigned to avoid the area. All no-disturbance buffers shall be delineated in the field with visible flagging or fencing material.

MM 4.4-6: The project proponent/operator shall implement the following measures to ensure potential impacts to San Joaquin kit fox resulting from project activities will be avoided and minimized to less-than-significant levels:

- a. Pre-construction surveys shall be conducted within the disturbance zone and a 200-foot buffer around the disturbance zone in suitable habitat within 14 days prior to the beginning of each construction area of grading or construction activity. Pre-construction surveys will identify San Joaquin kit fox habitat features on the project site and evaluate use by San Joaquin kit fox. The status of all possible San Joaquin kit fox dens will be categorized as a potential, atypical, known, or pupping den type and will be mapped. The results of these surveys shall be submitted to the County and resource agencies (as required) within 5 days of survey completion and prior to commencement of ground disturbance and/or construction activities.
- b. Biological monitor should be present while ground disturbing activities are occurring in suitable habitat if the preconstruction survey indicates that San Joaquin kit fox may be present. If San Joaquin kit fox dens are present, appropriate buffers will be established with highly visible markers according to the buffer distances, as described below by den type prior to construction activities:
 1. San Joaquin kit fox potential or atypical den: If a potential or atypical den is found, placement of four or five flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required but the 50-foot exclusion zone must be observed. Essential vehicle operation on existing roads and foot traffic is permitted within the exclusion zones, but the speed limit shall be 15 miles per hour within the exclusion zone.
 2. San Joaquin kit fox known den: If a known den is found, a 100-foot exclusion zone shall be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by San Joaquin kit fox. Acceptable fencing includes untreated wood particleboard, silt fencing, orange construction fencing, or other fencing as long as it has openings for San Joaquin kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction-related disturbances have ceased, or until the den has been monitored and a lack of San Joaquin kit fox activity is documented, as described under Den Excavation, below. At that time, all fencing shall be removed to avoid attracting post-construction attention to the dens, or the den can be excavated as described under Den Excavation, below.

- c. San Joaquin kit fox natal/pupping den: If a San Joaquin kit fox natal/pupping den is documented during pre-construction surveys, a 200-foot exclusion zone shall be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by San Joaquin kit fox. Acceptable fencing includes untreated wood particleboard, silt fencing, orange construction fencing, or other fencing as long as it has openings for San Joaquin kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction-related disturbances have ceased, or until the den has been monitored and a lack of San Joaquin kit fox activity is documented, as described under Den Excavation, below. At that time, all fencing shall be removed to avoid attracting post-construction attention to the dens, or the den can be excavated.
- d. Buffer distances and measures can be modified with prior authorization from U.S. Fish and Wildlife Service and California Department of Fish and Wildlife.
- e. Den Excavation: Based on the results of the pre-construction surveys, if avoidance of dens is not a reasonable alternative, limited destruction of San Joaquin kit fox dens may be allowed. Dens shall be fully excavated, filled with dirt, and compacted so that San Joaquin kit fox cannot reenter the den during the construction period. Hand excavation shall be used whenever feasible. If at any point during the excavation a San Joaquin kit fox is discovered inside the den, the excavation activity shall cease immediately, and the den shall be monitored as described below. Destruction of the den may be completed when, in the judgment of the project Lead Biologist, the animal has escaped without further disturbance. Excavation of dens shall be conducted under the supervision of biologist, in accordance with U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox prior to or during Ground Disturbance.
 1. Absolutely no excavation of San Joaquin kit fox known dens shall occur without prior authorization from the U.S. Fish and Wildlife Service or California Department of Fish and Wildlife. Destruction of any known or natal/pupping San Joaquin kit fox den requires take authorization from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife.
 2. Natal/pupping dens: Natal/pupping dens that are occupied will not be destroyed until the pups and adults have vacated and consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife has occurred.
 3. Known dens: Known dens within the project footprint must be monitored for 3 days/nights using a tracking medium or infrared camera stations to determine the current use. If no San Joaquin kit fox activity is observed during this period, the den shall be destroyed immediately to prevent future use. If San Joaquin kit fox activity is observed at the den, then the den shall be monitored for at least 4 consecutive days from the time of observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging the entrance(s) with soil in such a manner that any resident animal can escape easily. Once the den is determined to be unoccupied, then the den may be excavated. If the animal is still present after 4 or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of the project Lead Biologist, it is temporarily vacant; for example, during the animal's normal foraging activities.

4. Potential/atypical dens: If a take authorization/permit has been obtained from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife, destruction of potential and atypical dens may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential and atypical dens should be monitored as if they were known dens. If any den was considered to be a potential or atypical den, but is later determined during monitoring or destruction to be currently or previously used by San Joaquin kit fox (e.g., if San Joaquin kit fox sign is found inside), then all construction activities shall cease and the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be notified immediately.
- f. To prevent inadvertent entrapment of San Joaquin kit fox during construction, all excavated, steep-walled holes, or trenches more than 2 feet deep shall be covered with plywood or similar materials at the close of each working day by plywood or similar materials or, or be provided with one or more escape ramps constructed of earth fill or wooden planks (wooden planks should be no less than 10 inches in width and should reach to bottom of trench and be installed at 1:1 slope). Before such holes or trenches are filled, they shall be thoroughly inspected for trapped San Joaquin kit fox.
 - g. Construction materials will not be stacked in a manner that allows San Joaquin kit fox to establish den sites within the material. Construction items such as solar panel and equipment transported to the project on pallets will be placed directly on the ground, and the pallets removed from the site. All pipes, culverts, or similar structures with a diameter of 4 inches or more that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for San Joaquin kit fox before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If San Joaquin kit fox is discovered inside a pipe, the project biologist shall flush the species from the pipe. If San Joaquin kit fox is discovered that section of pipe shall not be moved until the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife has been consulted. If necessary, under the direct supervision of the project biologist, the pipe may be moved once to remove it from the path of construction activity until the species has escaped.
 - h. Unless biological monitors allow alterations to routes, all project vehicles should be confined to existing roads or prominently staked and/or flagged access routes that are surveyed prior to use.
 - i. Speed limits should be restricted to 15 miles per hour during daylight hours (5 am to 9 pm) and 10 miles per hour during night-time hours on the site and 25 miles per hour on public roads in the vicinity during both day and night-time driving.
 - j. Project will be constructed with appropriate kit fox-friendly standards, which includes fencing plan that will allow require kit-fox permeable fencing surrounding the site so that kit foxes can pass through the project site. There will be no mass grading of the site.

MM 4.4-7: The project proponent shall consult with the California Department of Fish and Wildlife (CDFW) regarding needed mitigation for potential impacts to burrowing owl if they are present. In consultation with CDFW the applicant shall implement the following measures as requested. These measures are based on the recently updated CDFW 2012 Staff Report on Burrowing Owl Mitigation. Coordination of mitigation efforts between the applicant and CDFW

will be used to determine which of the following mitigation efforts would be needed to ensure potential impacts to burrowing owl resulting from project implementation will be avoided and minimized to less-than-significant levels:

- a. A qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct pre-construction surveys of the permanent and temporary impacts areas, plus an ISO-meter (approximately 492-foot) buffer, to locate active breeding or wintering burrowing owl burrows no less than 14 days prior to construction. The survey methodology will be consistent with the methods outlined in the Staff Report and will consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing. As each burrow is investigated, biologists will also look for signs of American badger and kit fox. Copies of the survey results shall be submitted to the California Department of Fish and Wildlife and Kern County Planning and Natural Resources Department.
- b. If burrowing owls are detected, no ground-disturbing activities, such as road construction or ancillary facilities, shall be permitted within the distances listed below in the table titled "Burrowing Owl Burrow Buffers," unless otherwise authorized by California Department of Fish and Wildlife. Burrowing owls shall not be moved or excluded from burrows during the breeding season.
- c. If avoidance of active burrows is infeasible, the owls can be passively displaced from their burrows according to recommendations made in the 2012 Staff Report on Burrowing Owl Mitigation. Burrowing owls should not be excluded from burrows unless or until:
 1. Occupied burrows shall not be disturbed during the nesting season unless a qualified biologist meeting the Biologist Qualifications set forth in the May 2012 California Department of Fish and Wildlife Staff Report, verifies through noninvasive methods that either: (1) the owls have not begun egg-laying and incubation; or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Burrowing owls will not be moved or excluded from burrows during the breeding season.
 2. A Burrowing Owl Exclusion Plan is developed and approved by the applicable local California Department of Fish and Wildlife office and submitted to the Kern County Planning and Natural Resources Department. The plan shall include, at a minimum:
 - A. Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping;
 - B. Type of scope and appropriate timing of scoping to avoid impacts;
 - C. Occupancy factors to look for and what will guide determination of vacancy and excavation timing (one-way doors should be left in place 48 hours to ensure burrowing owls have left the burrow before excavation, visited twice daily, and monitored for evidence that owls are inside and can't escape, i.e., look for sign immediately inside the door);

- D. How the burrow(s) will be excavated: Excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible (may include using piping to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that owls reside the burrow);
 - E. Removal of other potential owl burrow surrogates or refugia on-site;
 - F. Photographing the excavation and closure of the burrow to demonstrate success and sufficiency;
 - G. Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take; and
 - H. How the impacted site will continually be made inhospitable to burrowing owls and fossorial mammals (e.g., by allowing vegetation to grow tall, heavy disking, or immediate and continuous grading) until development is complete.
- 3. Permanent loss of occupied burrow(s) and habitat is mitigated in accordance with the measures described below.
 - 4. Temporary exclusion is mitigated in accordance with the measures described below.
 - 5. Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Conduct daily monitoring for 1 week to confirm young of the year have fledged if the exclusion will occur immediately after the end of the breeding season.
 - 6. Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band re-sight).
- d. In accordance with the Burrowing Owl Exclusion Plan, a qualified wildlife biologist shall excavate burrows using hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially active burrows within 160 feet of the active burrow. The one-way doors can be removed 48 hours after installation, and ground-disturbing activities can proceed. Alternatively, burrows can be filled to prevent reoccupation.
 - e. During construction activities, monthly and final compliance reports shall be provided to the California Department of Fish and Wildlife, Kern County Planning and Natural Resources Department, and other applicable resources agencies documenting the effectiveness of mitigation measures and the level of burrowing owl take associated with the proposed project.
 - f. Should burrowing owls be found on-site, compensatory mitigation for lost breeding and/or wintering habitat shall be implemented on-site or off-site in accordance with Burrowing Owl

Staff Report guidance and in consultation with the California Department of Fish and Wildlife. At a minimum, the following recommendations shall be implemented:

1. Temporarily disturbed habitat shall be restored, if feasible, to pre-project conditions, including decompacting soil and revegetating. If restoration is not feasible, then the project proponent shall implement (2) below.
2. Permanent impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat will be mitigated such that the habitat acreage, number of burrows, and burrowing owls impacted are replaced based on a site-specific analysis and shall include permanent conservation of similar vegetation communities (grassland, scrublands, desert, urban, and agriculture) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and with sufficiently large acreage, and presence of fossorial mammals. Conservation shall occur in areas that support burrowing owl habitat and can be enhanced to support more burrowing owls.
3. Permanently protect mitigation land through a conservation easement deeded to a nonprofit conservation organization or public agency with a conservation mission. If the project is located within the service area of a California Department of Fish and Wildlife-approved burrowing owl conservation bank, the project operator may purchase available burrowing owl conservation bank credits.
4. Develop and implement a mitigation land management plan in accordance with Burrowing Owl Staff Report guidelines to address long-term ecological sustainability and maintenance of the site for burrowing owls.
5. Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism such as an endowment.
6. Habitat shall not be altered or destroyed, and burrowing owls shall not be excluded from burrows, until mitigation lands have been legally secured, are managed for the benefit of burrowing owls according to California Department of Fish and Wildlife-approved management, monitoring and reporting plans, and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed.
7. Mitigation lands should be on, adjacent to, or in proximity to the impact site, where feasible, and where habitat is sufficient to support burrowing owls.
8. Consult with the California Department of Fish and Wildlife when determining off-site mitigation acreages.

MM 4.4-8: The project proponent shall continuously comply with the following: If any burrowing owl burrows are observed during the pre-construction survey, avoidance measures shall be consistent with those included in the California Department of Fish and Wildlife staff report on burrowing owl mitigation .

If occupied burrowing owl burrows are observed outside of the breeding season, a passive relocation effort may be instituted in accordance with the guidelines established by the Staff Report on Burrowing Owl Mitigation (2012) by the California Department of Fish and Game in the table below that shows the recommended restricted activity dates and setback distances by level of disturbance. During the breeding season, a buffer zone, as noted in the table below, shall be maintained unless a qualified biologist verifies through noninvasive methods that either the birds have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Buffer zones may be reduced in size through consultation with appropriate agencies and the project biologist to determine if avoidance would still be achieved. The Kern County Planning and Natural Resources Department shall be kept apprised of meetings and correspondence for any consultation.

Location	Time of Year	Level of Disturbance		
		Low	Medium	High
Nesting sites	April 1 – Aug 15	200 m	500 m	500 m
Nesting sites	Aug 16 – Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16 – Mar 31	50 m	100 m	500 m

Source: California Department of Fish and Game – Staff Report on Burrowing Owl Mitigation, March 7, 2012.

MM 4.4-9: The project proponent/operator shall implement the following measures to ensure potential impacts to blunt-nosed leopard lizard resulting from project implementation and improvement activities will be avoided and minimized to less-than-significant levels:

Prior to grading initiation of improvement activities, to the 56 acres of undeveloped area, the project proponent shall conduct appropriate pre-construction surveys as identified below to avoid impacts to blunt-nosed leopard lizard.

- a. All activities that will result in permanent or temporary ground disturbances to any previously undisturbed areas or adjacent to undisturbed areas should be preceded by a pre-construction survey within 14 days of construction by a qualified biologist(s). In addition, another pre-construction survey completed within 24 hours to the onset of construction will be conducted if potential habitat or the species is located. The biologist(s) should identify and clearly mark the location of areas where any blunt-nosed leopard lizard were observed. If a blunt-nosed leopard lizard is observed within the project site, U.S. Fish and Wildlife Service and California Department of Fish and Wildlife will be contacted to establish avoidance measures. If construction stops for longer than 2 weeks, a pre-construction survey will need to be conducted prior to construction starting again.
- b. A biological monitor(s) should be present while ground disturbing activities are occurring if the preconstruction survey indicates that blunt-nosed leopard lizard may be present. In addition to conducting preconstruction surveys, the biological monitors should aid crews in implementing/installing take avoidance measures for blunt-nosed leopard lizard and implementing project avoidance and mitigation measures if the preconstruction survey indicates the species may be present. Biological monitors are empowered to order cessation of activities if an immediate threat of “take” is identified, if take avoidance and/or mitigation measures are violated, or if a blunt-nosed leopard lizard is located within the construction area.

- c. If it is determined that the blunt nose leopard lizard is present during the pre-construction survey, to prevent inadvertent entrapment of blunt-nosed leopard lizard, open holes, steep-walled holes, or trenches more than 2 feet deep should be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth fill or wooden planks (wooden planks should be more no less than 10 inches in width and should reach to bottom of trench and be installed at a 1:1 slope). Before such holes or trenches are filled, they should be thoroughly inspected by a biological monitor for trapped animals.
- d. If it is determined that the blunt nose leopard lizard is present during the pre-construction, a project representative will be appointed who will be the contact source for any employee or contractor who inadvertently kills or injures a blunt-nosed leopard lizard or who finds a dead, injured, or entrapped individual blunt-nosed leopard lizard. The representative will be identified in the Worker Environmental Awareness Training and Education Program. U.S. Fish and Wildlife Service and California Department of Fish and Wildlife will be contacted immediately in the case of a dead, injured, or entrapped blunt-nosed leopard lizard by the chosen representative.

If blunt-nosed leopard lizard are detected during any identified survey of the project site, the following provisions will be implemented.

- a. If blunt-nosed leopard lizard are observed within 50 feet of proposed disturbance areas during the initial clearance surveys, exclusion fencing shall be installed in such a manner as to segregate blunt-nosed leopard lizard from the construction/improvement areas and to ensure that direct take of the species does not occur. The actual distance from the construction/improvement areas where exclusion fencing is installed may depend on the conditions of the composting site, but the fencing will be installed at a maximum 50-foot radius from the outermost edge of the construction/improvement areas, directed by the authorized biologist. The project biologist shall be on site during the fencing installation to ensure that no blunt-nosed leopard lizard are inadvertently harmed/harassed during installation.
- b. Fencing shall provide escape routes from excluded construction areas to areas beyond the construction work area to enable blunt-nosed leopard lizard to move outside the excluded area away from construction activities. The fencing escape routes shall be closed to prevent blunt-nosed leopard lizard from reoccupying the area prior to commencing earth-disturbing activities. The fenced zone can be expanded in the project site, as necessary and following the same survey and escape route protocol described above, to exclude individual blunt-nosed leopard lizard from construction zones.
- c. If blunt-nosed leopard lizard are observed or suspected (based on scat, tail drag marks, or other sign) of occurring within a fenced construction zone during the exclusion zone surveys, daily surveys shall be conducted for another consecutive 5 days from the date of the observation to allow sufficient time for individual blunt-nosed leopard lizard to vacate the excluded area.

MM 4.4-10: The project proponent/operator shall implement the following measures to ensure potential impacts to American badger resulting from project implementation/improvements will be avoided and minimized to less-than-significant levels:

- a. All activities that will result in permanent or temporary ground disturbances to previously undisturbed areas or that are adjacent to undisturbed areas shall be preceded by a preconstruction survey conducted by a biological monitor within 14 days prior to the beginning construction activity. The biologist(s) should identify and clearly mark the location(s) of areas where potential badger den(s) was/were identified. The surveys should be conducted in parallel transects spaced 30 feet apart.
- b. It may be determined that a biological monitor(s) should be present while ground disturbing activities are occurring based on the sensitivity of the habitat. If a badger den is located, the den(s) should be identified by highly visible flagging and avoided by a buffer with a radius determined by a biological monitor.
- c. If one or more badger dens are found during the pre-activity survey, the following steps will be taken:
 1. The den(s) will be carefully inspected to evaluate its activity status. If the biologist is uncertain about the activity status of a den, a tracking medium (such as diatomaceous earth) should be placed in front of the den for 3 consecutive nights. The tracking medium should be checked each following morning for tracks.
 2. If no tracks are observed after three nights of monitoring, the den can be considered to be inactive. It should be completely excavated with hand tools until it is certain that no badgers are inside. When excavation is completed, the den should be backfilled and compacted to ensure that no badgers can re-enter the den during construction. If at any point during the excavation a badger is discovered inside the den, excavation should stop until the badger has been allowed to move away. Excavation should either be done by a qualified biologist or under the supervision of a qualified biologist.
- d. If the den is active, it should be monitored for an additional five consecutive nights to allow badgers using the den to move to another den. The badger can be discouraged from continued use of the den by partially blocking the den entrance with soil. The soil should be placed in front of the den in such a manner that the resident badger is able to escape easily. When, in the judgement of the biologist, the badger has moved from the den, it should be excavated as explained above.

MM 4.4-11: Prior to issuance of grading or building permits for the undeveloped 56 acres, a long-term trash abatement program shall be established for construction, operations and maintenance. Trash and food items shall be contained in closed containers and removed daily.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.4-1- through MM 4.4-11**, and **MM 4.9-2** (see **Section 4.9, Hazards and Hazardous Materials** for full Mitigation Measure text) impacts would be less than significant.

Impact 4.4-2: The project would interfere substantially with the movement of any native or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

The entire project parcel including the composting Facility is highly disturbed due to agricultural and ongoing disking for weed control and composting activities. Although formal wildlife movement studies were not conducted for the project site, based on the fact that the surrounding areas adjacent to the project site are developed with solar installation, similarly disturbed, or intensively farmed, it is unlikely that any portion of the project site would serve as an important linkage between habitats. In addition, there are no regional migratory wildlife corridors that have been identified by the County or state resources agencies within the study area.

Although some wildlife species may pass through the project site during local or regional movements, because there are no wildlife corridors within the project area, it is not likely that any portion of the project site serves as an important linkage between wildlife habitats. No significant direct permanent impacts would occur on wildlife movement or use of native wildlife nursery sites associated with project activities. Surrounding biotic habitats are similar, with intensively managed land further diminishing the possibility that the site is important for terrestrial wildlife movement; therefore, project activities would not result in impacts to wildlife movement due to construction. Additionally, opportunities for wildlife movement would remain intact to the north of the study area within existing roadways.

Therefore, there is the potential for wildlife species to traverse the project site. Mitigation Measures **MM 4.4-1 through MM 4.4-11** would be implemented as part of the proposed project and ensure impacts remain less than significant and the project would not result in significant impacts to wildlife corridors and migratory routes.

Mitigation Measures

Implement Mitigation Measures **MM 4.4-1 through MM 4.4-11**, above.

Level of Significance after Mitigation

With implementation Mitigation Measures **MM 4.4-1 through MM 4.4-11**, impacts would be less than significant.

Impact 4.4-3: The Project Would Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional or State Habitat Conservation Plan.

There is no adopted habitat conservation plan, natural community conservation plan or other approved local, regional, or state habitat conservation plan protecting biological resources on the project site. The KCVFHCP is a proposed HCP and has not been approved by the County or resource agencies. Therefore, KCVFHCP does not constitute an adopted HCP and the project is not required to analyze conflicts with the KCVFHCP.

The project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Mitigation Measures

No mitigation would be required.

Level of Significance

No impact.

Cumulative Setting, Impacts and Mitigation Measures

Cumulative impacts for a project would be significant if the incremental effects of the individual project are considerable when combined with the effects of past projects, other current projects, and probable future projects. As described above, the project-specific impacts of the project would be less than significant with implementation of Mitigation Measures **MM 4.4-1 through MM 4.4-11**.

As project and urbanization pressures increase within Kern County, including other composting projects, impacts to biological resources within the region are expanding on a cumulative level. As described in **Table 3-4, Cumulative Projects List**, in **Chapter 3, Project Description**, of this EIR, other projects with similar species effects have been completed within the San Joaquin Valley.

As described above, no special status species were observed, one species, burrowing owl was known to occur within the study areas, but none are anticipated to occur within the composting facility in the area where improvements are proposed. With the exception of burrowing owl and SJKF (both with medium potential to occur within the study area), and Swainson's hawk (with a low potential to occur) none of the other species area expected to occur due to the lack of suitable habitat or being outside the species known range. While the project area also provides little value to transient species or species using the area as a linkage between suitable areas, implementation of the project, in addition to the other projects underway or proposed within Kern County, would impact transient wildlife species. This would include burrowing owls, other raptors, SJKF and American badger. The composting facility is heavily disturbed and would not be used. In addition, with the exception of the southwesterly corner of the study area, because the balance of the site is routinely disked for vegetation management, the balance of the study area is likely to only be used by mobile avian and terrestrial wildlife. Uses of the site would be transient in nature, if at all due to the lack of habitat and existing and ongoing uses within the composting facility.

Given the number of present and reasonably foreseeable future development projects in the San Joaquin Valley, if the proposed project and proposed areas of disturbance would be located in an area used by sensitive species, it would be more likely to result in an incremental contribution to the loss of habitat and impact on sensitive species. However, the proposed project actions would occur within the existing composting facilities and the study area boundaries include this and heavily disturbed agricultural and ruderal habitat types. As such, the proposed project would not result in cumulative impacts to wetlands or other sensitive habitats, special status plants, violation of local or ordinances protecting biological resources, or conflict with an adopted HCPs, NCCPs, or other approved local, regional, or State HCPs. With the implementation of the mitigation listed above, cumulative impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures **MM 4.4-1 through MM 4.4-11**, above and Mitigation Measure 4.9-2 included in **Section 4.9, *Hazards and Hazardous Materials***.

Level of Significance after Mitigation

With implementation Mitigation Measures **MM 4.4-1 through MM 4.4-11**, and **MM 4.9-2** (see **Section 4.9, *Hazards and Hazardous Materials*** for full Mitigation Measure text), impacts would be less than significant.

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Section 4.5

Cultural Resources

4.5.1 Introduction

This section of the Draft Environmental Impact Report (EIR) provides contextual background information on historical resources within Kern County (County), including the area's prehistoric, ethnographic, and historical settings. This section analyzes the potential impacts associated with the implementation of the Synagro South Kern Compost Manufacturing Facility Project (proposed project) on cultural resources and identifies mitigation measures, if needed to address adverse impacts. This section is based on the cultural resource records searches, inventories, and County data.

For the purposes of the California Environmental Quality Act (CEQA), "historical resources" generally refer to cultural resources that have been determined to be significant, either by eligibility for listing in State or local registers of historical resources, or by determination of a lead agency (see definitions below). Historical resources can also include areas determined to be important to Native Americans that qualify as tribal cultural resources as defined in Public Resources Code (PRC) Section 21074 (sites, landscapes, historical, or archeological resources). Paleontological resources are also considered within this section.

Cultural Resources Terminology

Below are definitions of key cultural resources terms used in this section:

- **Alluvium:** a fine-grained sedimentary unit of soil consisting of mud, silt, and sand deposited by flowing water on flood plains, in river beds, and in estuaries.
- **Archaeological Site:** A site is defined by the National Register of Historic Places (NRHP) as the place or places where the remnants of a past culture survive in a physical context that allows for the interpretation of these remains. Archaeological remains usually take the form of artifacts (e.g., fragments of tools, vestiges of utilitarian, or non-utilitarian objects), features (e.g., remnants of walls, cooking hearths, or midden deposits), and ecological evidence (e.g., pollen remaining from plants that were in the area when the activities occurred).
 - **Prehistoric archaeological sites** generally represent the material remains of Native American groups and their activities dating to the period before European contact. In some cases, prehistoric sites may contain evidence of trade contact with Europeans.
 - **Ethnohistoric archaeological sites** are defined as Native American settlements occupied after the arrival of European settlers in California.
 - **Historic archaeological sites** reflect the activities of nonnative populations during the Historic period.
- **Area of Potential Impacts (API) (or cultural resources study area or study area):** The geographic area or areas within which a project may directly or indirectly cause alterations in

the character or use of significant historical or archaeological resources. The API is influenced by the scale and nature of the project as well as by the types of cultural resources in the vicinity. For the purposes of this EIR, the proposed project's API is an approximately 100-acre area within the existing composting Facility footprint.

- **Artifact:** An object that has been made, modified, or used by a human being.
- **Cultural Resource:** Cultural resources are expressions of human culture and history in the physical environment, and may include archaeological sites, buildings, structures, objects, districts, works of art, architecture, and natural features that were important in past human events. They may consist of physical remains, but also may include areas where significant human events occurred, even though evidence of the events no longer remains. Cultural resources also include places that are considered to be of traditional cultural or religious importance to social or cultural groups.
- **Cultural Resources Survey Area:** All areas of potential permanent and temporary project impacts.
- **Ecofact:** An object found at an archaeological site that has archaeological significance but has not been technologically altered, such as seeds, pollens, or shells.
- **Ethnographic:** Relating to the study of human cultures. "Ethnographic resources" represent the heritage resource of a particular ethnic or cultural group, such as Native Americans or African, European, Latino, or Asian immigrants. They may include traditional resource-collecting areas, ceremonial sites, value-imbued landscape features, cemeteries, shrines, or ethnic neighborhoods and structures.
- **Historic period:** The period that begins with the arrival of the first nonnative population and thus varies by area. In 1772, Commander Don Pedro Fages was the first white man to enter Kern County, initiating the historic period in the study area.
- **Historical resource:** This term is used for the purposes of CEQA and is defined in the CEQA Guidelines (§15064.5) as: (1) a resource listed in, or determined to be eligible for listing in the California Register of Historical Resources (CRHR); (2) a resource included in a local register of historical resources, as defined in Public Resources Code (PRC) §5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC §5024.1(g); and (3) 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 by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.
- **Holocene:** Of, denoting, or formed in the second and most recent epoch of the Quaternary period, which began 10,000 years ago at the end of the Pleistocene.
- **Isolate:** An isolated artifact or small group of artifacts that appear to reflect a single event, loci, or activity. Isolates typically lack identifiable context and thus have little interpretive or research value. Isolates are not considered to be significant under CEQA and do not required avoidance mitigation (CEQA Statute §21083.2 and CEQA Guidelines §15064.5).

- **Lithic:** Of or pertaining to stone. Specifically, in archaeology, lithic artifacts are chipped or flaked stone tools, and the stone debris resulting from their manufacture.
- **Native American sacred site:** An area that has been, or continues to be, of religious significance to Native American peoples, such as an area where religious ceremonies are practiced or an area that is central to their origins as a people.
- **Paleontological Resources (Fossils):** The physical remains of plants and animals preserved in soils and sedimentary rock units/formations. Paleontological resources contribute to the understanding of past environments, environmental change, and the evolution of life.
- **Pleistocene (Ice Age):** An epoch in the Quaternary period of geologic history lasting from 1.8 million to 10,000 years ago. The Pleistocene was an epoch of multiple glaciation, during which continental glaciers covered nearly one fifth of the earth's land.
- **Prehistoric period:** The era prior to 1772. The later part of the prehistoric period (post-1542) is also referred to as the protohistoric period in some areas, which marks a transitional period during which native populations began to be influenced by European presence resulting in gradual changes to their lifeways.
- **Quaternary Age:** The most recent of the three periods of the Cenozoic Era. It follows the Tertiary Period, spanning 2.588 ± 0.005 million years ago to the present. The Quaternary includes two geologic epochs: the Pleistocene and the Holocene Epochs.
- **Stratigraphy:** The natural and cultural layers of soil that make up an archaeological deposit, and the order in which they were deposited relative to other layers.
- **Tribal Cultural Resource:** These are defined in AB 52 as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either included or determined to be eligible for inclusion in the California Register or included in a local register of historical resources (PRC **Section 21074 (a)(1)**).
- **Unique Archaeological Resource:** This term is used for the purposes of CEQA and is defined in the CEQA Guidelines (§15064.5) as an archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it either contains information needed to answer important scientific research questions; has a special and particular quality such as being the oldest of its type or the best available example of its type; or, is directly associated with a scientifically recognized important prehistoric or historic event or person.
- **Unique Paleontological Resource:** This term is defined as a fossil that meets one or more of the following criteria: (1) it provides information on the evolutionary relationships and developmental trends among organisms, living or extinct; (2) it provides data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein; (3) it provides data regarding the development of biological communities or interaction between plant and animal communities; (4) it demonstrates unusual or spectacular circumstances in the history of life; or (5) the fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

4.5.2 Environmental Setting

As described in **Chapter 3, Project Description**, the project site is an existing composting facility located at 2653 Santiago Road approximately 7 miles west of Interstate 5 (I-5), at South Lake Road, and approximately 12 miles east of the City of Taft. The project site is immediately accessed from Santiago Road, which is connected to I-5 approximately 7 miles to the west via South Lake Road and Millux Road. On-site topography is relatively flat and is approximately 320 feet above mean sea level (amsl). The City of Bakersfield is approximately 25 miles to the northeast, the City of Taft is located approximately 12 miles to the west. The unincorporated communities of Taft Heights and Ford City, located adjacent to the south and north of the City of Taft, also are located approximately 12 miles to the west and the unincorporated communities of Dustin Acres and Valley Acres are located approximately 10 miles northwest of the project site along State Route (SR) 119.

The proposed project is located within the South Kern Industrial Center Specific Plan (SKICSP) area. The existing composting facility that operates under existing Conditional Use Permit (CUP) No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) on a project parcel consisting of 100 acres of already disturbed land. The proposed modifications to the current CUP would not expand the footprint of the composting facility. The proposed project would only occur and expand operations within the existing approved 100-acre facility.

Both the 1992 EIR and the 2002 SEIR prepared for the SKICSP did not identify any change in the significance of a historical resource within the project site. An archaeological assessment was completed for the EIR prepared for the SKICSP adopted in 1992. The report noted that there was a prehistoric burial ground located adjacent to the SKICSP boundaries but that it had not been formally recorded as a site. No human remains, however, were identified on the project site and no known cultural or remains exist within the project area.

Since that time, the conditions of the site related to cultural resources and potential presence of historical or archaeological resources pursuant to § 15064.5 has not changed. The existing composting facility has been in active operation on the site since 2006 and the entire project site is extensively disturbed and developed or used for composting related activities.

Prehistoric and Archaeological Setting

Late Pleistocene

During the late Pleistocene, the southern San Joaquin Valley was dominated by large shallow lakes, namely, Tulare Lake and Buena Vista Lake (Garone, 2011; West et al. 2007). The relict lake beds of Tulare and Buena Vista lakes are located approximately 60 miles northwest and 20 miles west of the project site, respectively. These lakes supported large flocks of migratory birds, as well as fish, and provided marsh, riparian, and grassland habitats that drew in tule elk, pronghorn antelope, and grizzly bears that migrated annually from the Sierra Nevada Mountains (Garone, 2011).

Pre-Projectile Point Period (12,000+ BP)

Late Pleistocene archaeological sites, which may predate 12,000 years before present (BP), are often referred to as pre-Clovis, or pre-projectile point, period sites. These sites are viewed as controversial by many archaeologists because of doubts about identifications of artifacts and

interpretations of contexts; circular logic or circumstantial evidence used to estimate age; or the use of still-experimental dating techniques. One of the best-documented studies supporting the Late Pleistocene period is Emma Lou Davis's 1978 work at China Lake, near Ridgecrest in eastern California. Other examples include the Calico Early Man Site and the Manix Lake Lithic Industry, both of which are located in the Mojave Desert east of Barstow, California.

Prehistoric Setting

The prehistoric record of the Central Valley, which includes the San Joaquin and Sacramento valleys and the San Joaquin-Sacramento Delta, is divided into three basic periods: Paleo-Indian (11,550 to 8,550 cal B.C.), Archaic (8,550 cal B.C. to cal A.D. 1100), and Emergent (cal A.D. 1100 to Historic). The Archaic period is further divided into three sub-periods: Lower Archaic (8,550 to 5,550 cal B.C.), Middle Archaic (5,550 to 550 cal B.C.), and Upper Archaic (550 cal B.C. to cal A.D. 1100) (Rosenthal et al., 2007).

Paleoindian Period (Circa 11,550 to 8,550 cal B.C)

Evidence of human occupation of the Central Valley during the Paleo-Indian period comes primarily from the San Joaquin Valley (the valley). Basally thinned and fluted concave base projectile points, similar to Clovis points, have been found in three San Joaquin Valley areas: Tracy Lake, the Woolfsen mound, and the Tulare Lake basin. The Witt site (CA-KIN-32), located on a Late Pleistocene shoreline of Tulare Lake, produced hundreds of these points (Rosenthal et al., 2007). Human and faunal bone recovered from this site have been dated between 10,788 and 17,745 uncalibrated radiocarbon years before present; however, there is no direct association between the projectile points found and the bone found. Little other evidence of human occupation during the Paleo-Indian period is available for the Central Valley.

Lower Archaic (8,550 to 5,550 cal B.C.)

Lower Archaic occupation of the Central Valley is known mainly from isolated finds located along the ancient shorelines of lakes. Stemmed points, chipped stone crescents, and other flaked stone artifacts are frequently recovered from the ancient shorelines of Tulare Lake (Rosenthal et al., 2007). Archaeological evidence from the valley floor and adjacent foothill suggests two distinct cultural adaptations, though the degree of variation and interaction between valley floor and foothill groups is presently unknown; these variations may not represent divergent adaptations, but rather seasonal expressions of the same group (Rosenthal et al., 2007).

Very little archaeological evidence exists for occupation of the valley floor during the Lower Archaic. One component from site CA-KER-116 was dated to between 7,175 and 6,450 cal B.C. based on radiocarbon assays obtained from freshwater mussels. This site is located on the ancient shoreline of Buena Vista Lake, between Bakersfield and Taft (Rosenthal et al., 2007). The artifact assemblage from CA-KER-116 included chipped stone crescents, a stemmed projectile point fragment, a carved stone atlatl spur, and additional flaked stone tools. Faunal remains included freshwater fish, waterfowl, freshwater mussel, and artiodactyl. No plant remains or milling tools were recovered (Rosenthal et al., 2007). While regional trade of marine shell beads and obsidian is well documented for other areas during this time, the Lower Archaic deposits from CA-KER-116 did not contain beads or obsidian.

In contrast to the valley floor, ground stone tools indicative of plant processing, such as handstones and milling slabs, are common in adjacent foothill sites (Rosenthal et al., 2007). These sites appear to have been seasonally exploited, with nuts, such as acorn and pine, more commonly consumed than small seeds. Artifact assemblages suggest a semi-permanent settlement system with rotating occupation of seasonal camps.

Middle Archaic (5,550 to 550 cal B.C)

The Middle Archaic is characterized by a climatic shift to warmer, drier conditions, similar to present-day conditions. This change was likely the primary impetus for culture change throughout California. In the Central Valley, Tulare Lake receded as the Sacramento-San Joaquin Delta wetland habitat developed.

By the Middle Archaic, foothill and valley floor groups had distinct and separate adaptations. Early sites from the Middle Archaic period are more abundant in the foothill areas and are characterized by large quantities of ground stone tools designed to process acorns and pine nuts. Projectile points are typically made from locally available materials and include notched, stemmed, thick-leaf, and narrow concave base darts. There is a lack of bone and shell artifacts (Rosenthal et al., 2007).

Compared to earlier periods, valley floor groups are better represented in sites dating from the later Middle Archaic period. These sites reflect an increasing exploitation of river corridors in the Sacramento and San Joaquin valleys. Sites were occupied year-round and technological assemblages suggest a growing reliance on fishing. Gorge hooks, composite bone hooks, and spears all appear in the archaeological record during the Middle Archaic. Tule elk, mule deer, pronghorn sheep, rabbits, and waterfowl are also represented in faunal assemblages and indicate exploitation of freshwater marshes, riparian forests, and grasslands. Mortars and pestles appear around 4,050 cal B.C.; however, acorn and pine nut remains are also commonly recovered from sites lacking mortars and pestles (Rosenthal et al., 2007).

Middle Archaic sites in the northern San Joaquin Valley and southern Sacramento Valley include artifacts more common to later time periods elsewhere in the region, including fine-twisted cordage, twined basketry, basketry awls, simple pottery, and baked clay objects (Rosenthal et al., 2007). Items of personal adornment, such as stone plummets, bird bone tubes, and shell beads, are also present in Middle Archaic deposits.

Regional trade was widespread during the Middle Archaic, as evidenced by obsidian and shell beads and ornaments commonly recovered from sites. The earliest appearance of Olivella grooved-rectangle beads is in the southern San Joaquin Valley (at sites CA-KER-3166/H and CA-KER-5404), where they generally date to 3,050 cal B.C. or earlier (Rosenthal et al., 2007). Settlement patterns reflect more stable, long-term occupation of resource-abundant areas.

The Middle Archaic period is typified by the Windmill Pattern, first identified in the Sacramento-San Joaquin delta region. In the Central Valley, Windmill sites generally date to between 1,850 and 750 cal B.C. These sites, found as far south as Buena Vista Lake, are characterized by westerly oriented, ventrally and dorsally extended burials and complex grave offerings (Rosenthal et al., 2007). Windmill Pattern cemeteries exhibit not only a distinct burial pattern, but evidence of

resource depletion and increased interpersonal violence. Osteological studies reveal higher levels of malnutrition and skeletal trauma, such as fractures and embedded stone points.

Upper Archaic (550 cal B.C. to cal A.D. 1100)

Climatic changes at the start of the Upper Archaic resulted in a cooler, wetter, and more stable environment. During the Upper Archaic period, regional variations in adaptation were more common and focused on resources that could be processed in bulk, such as acorns, salmon, shellfish, rabbits, and deer. Polished and ground stone plummets, sometimes recovered as caches, are commonly recovered from riparian environments and marshlands in the delta and southern San Joaquin Valley. Use of mortars and pestles for food processing was prevalent, except for the valley margins where handstones and millingslabs remained dominant (Rosenthal et al., 2007).

Shell bead trade and technological specialization increased. Shell bead types include saucer and saddle shaped Olivella beads. Bone wands, tubes, and ornaments, as well as well-made ceremonial obsidian blades, appear in the archaeological record at this time. In the San Joaquin Valley, obsidian biface blanks were imported via east-west travel corridors from eastern Sierra Nevada Mountains quarries, including Bodie Hills, Casa Diablo, and Coso. Lanceolate-shaped bifaces were produced by specialized craftsman located near northern obsidian sources and were widely traded throughout the Central Valley.

The delta region of the lower Sacramento Valley saw the rise of large mounded villages characterized by extensive habitation deposits with fire-cracked rock, hearths, ovens, house floors, and flexed burials. This adaptation is known as the Berkeley Pattern. However, the presumed descendants of the Windmill Pattern remained in the San Joaquin Valley during this time period. Upper Archaic Windmill sites in the San Joaquin Valley are generally located along the western and southern margins of the delta, as well as near streams and marshes (Rosenthal et al., 2007). Excavated cemeteries located along the western fringes of the San Joaquin Valley contained either flexed or extended burials and may reflect alternating occupation of this area by valley and coastal range groups.

Sites around Buena Vista Lake in the southern San Joaquin Valley reflect year-round occupation of villages, as evidenced by house floors and extensive middens. House floors appear in the archaeological record as large, round depressions ranging in diameter from 4 to 8 meters and 0.3 to 1 meter in depth. Other indicators of residential dwellings include hearths, post holes, and underground storage pits .

During the Emergent Period, many Archaic Period technologies and cultural traditions disappeared throughout the Central Valley. Practices very similar to those observed by later European explorers appeared at this time. Research on Emergent Period sites in the San Joaquin Valley has been limited and only one cultural pattern, the Panoche Complex, has been fully identified. The Panoche Complex (circa A.D. 1500 to 1850) is characterized by large circular structures, flexed burials and cremations, small sidenotched projectile points, shell disk beads, and ground stone, such as mortars, pestles, and some metates .

The Emergent Period is often divided into the Lower Emergent (A.D. 500-1500) and Upper Emergent (A.D. 1500-1800). The Lower Emergent Period is characterized by banjo-type Haliotis

ornaments, incised bird bone whistles and tubes, flanged soapstone pipes, and rectangular Olivella sequin beads. The bow and arrow replaced the dart and atlatl in hunting tool kits. Panoche side-notched points, a variation of the Desert side-notched point, have been recovered from Lower Emergent Period sites along the western side of the San Joaquin Valley. The Upper Emergent is characterized by small corner-notched and desert series projectile points, Olivella lipped and clam disk beads, bead drills, magnesite cylinders, and hopper mortars. While limited cremation was practiced during the Lower Emergent, it became widespread during the Upper Emergent. In general, increasingly complex burial practices developed, as indicated by grave goods and variation in burial type (Fredrickson, 1974; Rosenthal et al., 2007).

By the end of the Emergent Period, village sites and territorial boundaries closely resembling those documented in ethnographic literature had been established. Trade relations were highly regularized and sophisticated, with increasing quantities of goods moving over greater distances. Clam disk beads became a monetary unit of trade. Individual and groups of specialized craftsman arose, governing various aspects of production and exchange throughout California (Fredrickson, 1974).

Central Valley sites during this time period exhibit faunal assemblages characterized by large quantities of fish bone and a diversity of bird and mammal bones, with some regional variations. Plant use is represented by the mortar and pestle, though the types of plants exploited in the San Joaquin Valley are not well documented. In the Sacramento Valley, small seeds became an increasingly important staple, as well as acorns, pine nuts, and manzanita. Diverse fishing equipment assemblages are common to the Sacramento Valley and include several types of harpoons, bone fishhooks, and gorge hooks. Twined and coiled basketry and netting have been recovered from several sites in the Central Valley, including CAMER-3 (the Menjoulet Site) located near Los Banos Creek (Rosenthal et al., 2007).

In the southern San Joaquin Valley, pottery was not manufactured but was obtained by trade with groups from the foothills to the east. Consumnes pottery was produced in the Sacramento Valley and is represented in several artifact assemblages from Sacramento County sites. Other clay items recovered from Sacramento Valley sites include baked clay balls (possibly used for cooking), and human and animal effigies (Rosenthal et al., 2007).

House floors are common throughout the Central Valley during the Emergent Period. A very large house floor, probably representing a ceremonial structure, was documented during excavations at the Menjoulet Site in Merced County. The floor measured 28 meters in diameter with a mud wall around the perimeter. Thirty cremations and two inhumations were recovered from beneath the house floor (Gamble, 2012; Moratto, 1984).

Ethnographic Setting

The native peoples of Kern County are of three major linguistic stocks and tribal groupings: the Yokuts of the San Joaquin Valley and foothills; the Chumash of the Coastal Ranges; and Shoshonean tribes, from the Uru-Aztekan language family, in parts of the Sierra Nevada Range and the eastern desert areas of Kern County.

The consensus among ethnographers is that the Yokuts occupied the entire San Joaquin Valley as well as the foothills of the western slope of the Sierra Nevada. Predicated on cultural and environmental differences, they are generally recognized as having three subgroups: the Southern Valley, Northern Valley, and Foothill Yokuts. Each was comprised of a number of distinct tribes or tribelets. The Southern Valley Yokuts ranged from just north of Tulare Lake to the southern end of the valley at the Tehachapi Mountains and from the lowest reaches of the southern Sierra Nevada and foothills of the Tehachapi Mountains on the east to the base of the Coastal Ranges on the west.

Yokuts Tribe

Ethnographers recognize three cultural-geographical divisions of Yokuts: Northern Valley, Southern Valley, and Foothills. Yokuts villages apparently extended up to, but not into, the mouths of the canyons on the northern and western fronts of the Tehachapi Mountains, well into the foothills and lower elevations of the Sierra Nevadas on the east, and to the crest of the Temblor Range on the west. The Yokut language belongs to the California Penutlan language family with at least 11 dialects among the Southern Valley branch. The distinction between the Northern Valley versus Southern Valley and Foothill Yokuts, aside from separate cultural adaptations to divergent environments, is primarily based on speaking distinct branches of the language.

The population of Yokuts tribes generally was in the hundreds, compared with the average American Indian tribe, which contained approximately two to four thousand members. The San Joaquin Valley floor was occupied by southern Valley Yokuts speakers, themselves divided into a series of autonomous “tribelets,” the boundaries of which are not well defined. North of the Buena Vista basin, and primarily on the eastern side of Buena Vista Slough, were found the Tuholu. Their home included the lower Kern River area and the complex consisting of Buena Vista, Bull, Jerry, and Goose Lake sloughs. Little is known about this group. They utilized the tule reeds that proliferated in the area for every conceivable purpose, including food, shelter, clothing, fuel, and transportation. The remaining three tribelets inhabiting the southern valley were located in the eastern sector.

Depending upon tribelet location, subsistence emphasized the acorn-bearing oak, with the addition of a wide variety of other plants, fish, and game, or the bountiful lacustrine resources found around lakeshore environments. As the Yokuts adapted to the abundance of subsistence resources, they developed a culture of comparatively greater material wealth and tended to live in large, more permanent settlements.

Interior Chumash

The territory of the Interior Chumash included portions of Kern, Los Angeles, San Luis Obispo, Santa Barbara and Ventura counties. The western and southwestern portions of Kern County Chumash territory are quite distinct from each other and will be divided into two subsections: 1) Temblor Range (Western Kern County); and 2) Coast Range and western tip of Tehachapi Mountains (South, Southwest Kern County). These two areas comprise the territory ascribed to the Interior Chumash with the Cuyama Chumash occupying the first area and the Castac Chumash occupying the latter area.

The interior Chumash lacked direct access to the marine resources that contributed to such unusually high population densities along the Santa Barbara coastline. Adaptation to the

environment was, therefore, more closely tied to terrestrial resources, especially the acorn-bearing oak, with cultural patterns, in general, very similar to surrounding interior groups, such as the Yokuts. Notably, however, the interior Chumash are particularly renowned for their rock paintings or pictographs, important concentrations of which are located on the San Emigdio Ranch and the Carrizo Plain. The interior Chumash in this region most likely spoke Ventureño Chumash.

Temblors (Cuyama Chumash)

The Temblors are a low-lying mountain range characterized as having little available water, game animals or abundant biotic resources. Apparently unchanged for a considerable amount of time, most portions of this region were generally unsuitable for settlement.

Some of the most impressive known sites in Cuyama territory are rock art sites where Chumash rock paintings reached their highest development. The pictograph style of the Chumash appears to have its origins with the petroglyphs of the Numic speaking peoples of the Great Basin who influenced Yokuts rock art styles and who in turn gave the Chumash their rock painting tradition. Most of the large sites are located in San Luis Obispo County; however, there are several pictograph sites in the Temblor Range portion of Kern County.

Coast Range (Castac Chumash)

The Castac (and Emigdiano) region extended from Castac Lake along the drainage of Pastoria Creek in the Tehachapi Mountains on the east, "on the north defined by a line drawn roughly from Grapevine to the Mount Abel Road and including all the north flowing streams from the Mount Abel-Tecuya Mountain Region." To the south their territory extends an unknown distance into Los Angeles County and on the west they border the Cuyama Chumash.

Kitanemuk

The Kitanemuk, along with the Kawaiisu, occupied the eastern/southern Sierra Nevada south of the Kern River and into the Tehachapi Mountains, and they also claimed a portion of the western Mojave Desert. During the Ethnographic period, neighboring groups included the Chumash to the west, the Southern Yokuts to the northwest, the Kawaiisu to the north, the Tataviam and Serrano to the south, and the Vanyume to the east. The notion of distinct cultural boundaries was foreign to the natives of the area, and overlapping of groups was customary. Kitanemuk maintained congenial interactions with other Serrano groups in the area, and with the Chumash to the west, the Tubatulabal to the north, and possibly the Kawaiisu. The Yokuts in the Central Valley and the Tataviam to the south, however, were considered enemies of the Kitanemuk.

Kitanemuk subsistence practices are not well known ethnographically and are also hard to determine based on the archaeological record due to the lack of archaeological studies in the Tehachapis. Consequently, their material culture is also not well documented. Their general ecological adaptation and subsistence technology differed little from their neighbors the Chumash to the west and Yokuts to the north. Subsistence strategies from other sites in adjacent areas suggest that they would have focused on hunting and gathering of local plant and animal resources. The Kitanemuk likely exploited resources outside of their core area, with seasonal trips to the Antelope Valley floor. However, evidence for these movements is limited due to the types of tasks involved, such as temporary camps for hunting and the procurement of lithic sources and seasonal foods. Based on other groups in the area, a principal food source was likely acorns, which would have

been supplemented with meat from large and small game, rodents, birds, and insects. Material culture attributed to the Kitanemuk include grinding stones, basketry, bowls, throwing sticks, bows and arrows, hunting blinds, nets, and other implements.

Kawaiisu

Information on the aboriginal life of the Kawaiisu is unsystematic and scattered in a number of papers. The Kawaiisu occupied a territory which included the southern end of the Sierra Nevada range and extended westward toward the San Joaquin Valley and eastward into the Mojave Desert. These tribal borders are vague and difficult to delineate. The core area for the Kawaiisu is said to have been the southern Sierra Nevada and Tehachapi Mountains.

Panamint Shoshone

The Little Lake Shoshone also called Coso or Panamint Shoshone, are only modestly treated within ethnographic accounts on Great Basin peoples. The territory of the Panamint Shoshone was a portion of the western Great Basin extending from the Sierra Nevada on the west to the Armagosa desert of Nevada on the east and from Owens Valley southward to an area in the south most likely shared with the Kawaiisu and other Southern Paiute groups. They would have occupied a small portion of northeastern Kern County.

Tuebatulabal

Tuebatulabal territory has been determined to include the region which was naturally drained by the Kern River including the area from the river's source near Mt. Whitney to the end of Kern Canyon northeast of Bakersfield. The eastern boundary runs along the Sierra Nevada crest south to Walker Pass and then along the crests of the Kiavah and Paiute Mountains southwest to the San Joaquin Valley. There has been some question concerning the Tuebatulabal-Kawaiisu border.

Historic Context

Spanish explorers first encountered the Southern Valley Yokuts in 1772 when a small contingent of soldiers, led by Pedro Fages, passed through the Tejon Pass and into the southern San Joaquin Valley. After a stop at a village on Buena Vista Lake, the party headed west toward San Luis Obispo. The area was visited again in 1776 by Francisco Garces. In 1806, Franciscans made a futile attempt to missionize the Southern Valley Yokuts. While a few members of some Southern Valley Yokuts groups (such as the Tachi and Telamni) were absorbed into the mission system, the majority of Central Valley Native Americans avoided the missionaries (Wallace, 1978).

The Southern San Joaquin valley became, instead, a haven for runaway neophytes of the Catholic Church mission system. These runaways introduced their own customs, as well as some learned from the Spanish, including a desire for horses. The Yokuts began to raid missions and ranchos and became known as the "Horsethief Indians" (Wallace, 1978). After Mexico won its independence from Spain, Mexican rancheros began to retaliate, trying to recover their lost livestock. Their efforts included punishing and enslaving the Yokuts raiders. An epidemic in 1833 decimated the Southern Valley Yokuts, killing off roughly 75 percent of the population.

Other intrusions in the Central Valley included American and British-Canadian fur trappers who entered the valley as early as 1827, and John C. Fremont, who conducted scientific expeditions into

the southern San Joaquin Valley in 1844 and 1845. However, sustained contact with Europeans did not occur until after 1850, when California became part of the United States. The remaining population of Yokuts gave up rights to their lands in exchange for goods in an 1851 treaty with the United States government. The Southern Valley Yokuts were subsequently moved onto either the Tejon or Fresno reservations.

Early American interest in southwestern Kern County focused on its use as a transportation corridor. In 1854, Fort Tejon was established to protect strategic mountain routes between the San Joaquin Valley and Southern California (Hoover et al., 2002). Many Euro-Americans traveled from the south to the gold country to the north by way of the Central Valley. The Central Valley was also used for cattle ranching and agriculture. The wetlands of the Valley were reclaimed, and irrigation canals built to facilitate agriculture. In the mid-1930s, the Great Depression, drought, and poor economic and agricultural conditions in the southern and plains states led to a mass migration of “Dust Bowl refugees” to California. Approximately 300,000-400,000 migrants from Oklahoma, Texas, Arkansas, Missouri, and other states moved to California, drawn by the promise of employment and a better life (Gregory, n.d.). Many ended up in the San Joaquin Valley to work as field hands; by 1950, as many as one in four residents of the San Joaquin Valley had emigrated from Oklahoma, Texas, Arkansas, or Missouri (Gregory, 1989). The influx of migrants led to a shortage of jobs, dramatically reduced wages, and abysmal living conditions. The migrants were pejoratively referred to as “Okies” and their plight was captured most famously by John Steinbeck in his 1939 book *The Grapes of Wrath*.

Valley Region

While most of the San Joaquin Valley may be generally characterized as “open flats,” outside of leveled fields and orchards, it is better described as an uneven plain consisting of extensive alluvial fans, debris flows and over-bank deposits. Historically, the southern San Joaquin Valley was a swampy, marsh zone consisting of a series of shallow lakes interconnected by sloughs and channels, primarily fed by streams originating in the mountains to the east. When gold was discovered in the Sierra Nevada Mountains in eastern Kern County, the population of the area grew rapidly. Some new immigrants began ranching in the San Joaquin Valley to supply the miners and mining towns. Ranchers grazed cattle and sheep, and farmers dry-farmed or used limited irrigation to grow grain crops, leading to the creation of small agricultural communities throughout the valley.

The southern San Joaquin Valley became significant as a center of food production for this new influx of people in California. The expansive, unfenced and principally public foothill spaces were well-suited for grazing both sheep and cattle. As the Sierra Nevada gold rush presented extensive financial opportunities, and ranchers introduced new breeds of livestock, consisting of cattle, sheep, and pig.

Following the passage of statewide ‘No-Fence’ laws in 1874, ranching practices began to decline, while farming expanded in the San Joaquin Valley in both large land holdings and smaller, subdivided properties. As the farming population grew, so did the demand for irrigation. Settlers began reclamation of swampland in 1866 and built small dams across the Kern River to divert water into the fields. By 1880, 86 different groups were taking water from the Kern River. Ten years later, 15 major canals provided water to thousands of acres in Kern County.

The San Joaquin Valley was dominated by agricultural pursuits until the oil boom of the early 1900s, which saw a shift in the region, as some reclaimed lands previously used for farming were leased to oil companies. The shift of the San Joaquin Valley towards oil production did not halt the continued growth of agriculture. The Great Depression of the 1930s brought with it the arrival of great number of migrants from the drought-affected Dust Bowl region looking for agricultural labor.

The beginning of oil industry development in the southern San Joaquin Valley began on the western side, with the first oil well drilled in 1877 and the first wooden oil derrick raised in 1887. By 1899, there were three oilfields established: (1) on the west side of the valley; (2) McKittrick and Midway-Sunset; and (3) with Kern River on the northeast of Bakersfield. The establishment of the western oilfields was greatly aided by the extension of the rail line to McKittrick in 1893. Thus, the expansion of the railways into the southern San Joaquin Valley was directly tied to, and symbiotic with, the drilling and production of the oil industry.

4.5.3 Regulatory Setting

Federal

Section 106 of the National Historic Preservation Act (NHPA)

Archaeological resources are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (54 USC 300101 et seq.), and its implementing regulation, Protection of Historic Properties (36 CFR Part 800); the Archaeological and Historic Preservation Act of 1974; and the Archaeological Resources Protection Act of 1979. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP), established the position of State Historic Preservation Officer (SHPO), and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP). Prior to implementing an “undertaking” (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties and to afford the ACHP and the SHPO a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the NRHP. As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the NRHP. Under the NHPA, a resource is considered significant if it meets the NRHP listing criteria at 36 Code of Federal Regulations (CFR) 60.4.

In addition, the NHPA (16 USC 470 et seq.) provides for the survey, recovery, and preservation of significant paleontological data when such data may be destroyed or lost due to a federal, federally licensed, or federally funded project.

National Register of Historic Places (NRHP)

The NRHP was established by the NHPA of 1966, as “an authoritative guide to be used by federal, State, and local governments, private groups, and citizens to identify the Nation’s cultural resources and to indicate what properties should be considered for protection from destruction or impairment” (CFR 36 Section 60.2). The NRHP recognizes both historic-period and prehistoric archaeological properties that are significant at the national, State, and local levels.

To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. A property (districts, sites, buildings, structures, and objects of potential significance) is eligible for the NRHP if it is significant under one or more of the following four established criteria:

- **Criterion A:** It is associated with events that have made a significant contribution to the broad patterns of our history.
- **Criterion B:** It is associated with the lives of persons who are significant in our past.
- **Criterion C:** It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.
- **Criterion D:** It has yielded, or may be likely to yield, information important in prehistory or history.

Cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

In addition to meeting the criteria of significance, a property must have *integrity*. Integrity is defined as “the ability of a property to convey its significance.” The NRHP recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects: (1) location, (2) design, (3) setting, (4) materials, (5) workmanship, (6) feeling, and (7) association. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.

Paleontological Resources Preservation Act

This act aims to manage and protect paleontological resources on federal land, using scientific principles and expertise, and to develop plans for inventorying, monitoring, and deriving the scientific and educational use of such resources.

State

Assembly Bill 52 and Related Public Resources Code Sections

Assembly Bill (AB) 52 was approved by California State Governor Edmund Gerald “Jerry” Brown, Jr. on September 25, 2014. The act amended California PRC Section 5097.94, and added public resources code (PRC) Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation (NOP) or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC

Section 21074(a)(1) and (2) define tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the CRHR or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a Lead Agency, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for the tribal cultural resources update to Appendix G of the State CEQA Guidelines, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 requires that within 14 days of a Lead Agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the Lead Agency provide formal notification to the designated contact, or a Tribal representative, of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the Lead Agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the Lead Agency’s formal notification and the Lead Agency must begin consultation within 30 days of receiving the Tribe’s request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project’s impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2(b)).

If a California Native American tribe has requested consultation pursuant to PRC Section 21080.3.1 and has failed to provide comments to the Lead Agency, or otherwise failed to engage in the consultation process, or if the Lead Agency has complied with Section 21080.3.1(d) and the California Native American Tribe has failed to request consultation within 30 days, the Lead Agency may certify an EIR or adopt an MND (PRC Section 21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American Tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the Lead Agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the Lead Agency publishes any information submitted by a California Native American Tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the Tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public

California Register of Historical Resources (CRHR)

Under the California Public Resources Code (PRC, Section 5024.19(a)), the CRHR was created in 1992 and implemented in 1998 as “an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the State’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change.”

Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys or designated by local landmarks programs, may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission (SHRC) determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

- **Criterion 1.** It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- **Criterion 2.** It is associated with the lives of persons important in our past.
- **Criterion 3.** It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
- **Criterion 4.** It has yielded, or may be likely to yield, information important in history or prehistory.

Furthermore, under PRC 5024.1, 14 CCR, Section 4852(c), a cultural resource must retain integrity to be considered eligible for the CRHR. Specifically, it must retain sufficient character or appearance to be recognizable as a historical resource and convey reasons of significance. Integrity is similarly evaluated with regard to retention of seven factors: (1) location, (2) design, (3) setting, (4) materials, (5) workmanship, (6) feeling, and (7) association.

Typically, an archaeological site in California may be recommended "eligible for listing" in the CRHR based on its potential to yield information important in prehistory or history (Criterion 4). Important information includes chronological markers such as projectile point styles or obsidian artifacts that can be subjected to dating methods or undisturbed deposits that retain their stratigraphic integrity. Sites such as these have the ability to address research questions. However, archaeological sites may also be recommended eligible under CRHR Criteria 1, 2, and/or 3.

California Historical Landmarks (CHLs)

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the County Board of Supervisors (or the city or town council in whose jurisdiction it is located); be recommended by the SHRC; and be officially designated by the Director of California State Parks. The specific standards now in use were first applied in the designation of CHL #770. CHLs #770 and above are automatically listed in the CRHR.

To be eligible for designation as a landmark, a resource must meet at least one of the following criteria:

1. It is the first, last, only, or most significant of its type in the State or within a large geographic region (Northern, Central, or Southern California);

2. It is associated with an individual or group having a profound influence on the history of California; or
3. It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events that are of local (City or County) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of historical interest designated after December 1997 and recommended by the SHRC are also listed in the CRHR. No historic resource may be designated as both a landmark and a point. If a point is later granted status as a landmark, the point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a point of historical interest, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type within the local geographic region (city or county);
- It is associated with an individual or group having a profound influence on the history of the local area; or
- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

California Environmental Quality Act (CEQA)

CEQA is the principal statute governing environmental review of projects occurring in the State and is codified at Public Resources Code (PRC) Section 21000 et seq. CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or archaeological resources.

Under CEQA (PRC Section 21084.1), a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. The CEQA Guidelines (14 California Code of Regulations [CCR] 15064.4) recognizes that historical resources includes: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) 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 by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 of CEQA and 14 CCR 15064.4 of the CEQA Guidelines apply. If a project may cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired) in the significance of a historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (14 CCR 15064.4(b)(1), 15064.4(b)(4)).

If an archaeological site does not meet the historical resource criteria contained in the CEQA Guidelines, then the site may be treated as a unique archaeological resource in accordance with the provisions of PRC Section 21083. As defined in PRC Section 21083.2 of CEQA, a unique archaeological resource is an archaeological artifact, object, or site for which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information,
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in PRC Section 21083.2, then the site is to be treated in accordance with the provisions of PRC Section 21083.2, which state that if the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place (PRC Section 21083.1(a)). If preservation in place is not feasible, mitigation measures shall be required.

The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (14 CCR 15064.4(c)(4)).

Native American Heritage Commission (NAHC)

PRC Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying of places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

California Public Records Act

Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to “Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission.” Section 6254.10 specifically exempts from disclosure requests for “records that relate to

archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another State agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a State or local agency.”

California Native American Graves Protection and Repatriation Act of 2001

Codified in the California Health and Safety Code Sections 8010–8030, the California Native American Graves Protection and Repatriation Act (Cal NAGPRA) is consistent with the federal NAGPRA. Intended to “provide a seamless and consistent State policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect,” Cal NAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The Cal NAGPRA also provides a process for non-federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

California Health and Safety Code, Sections 7050 and 7052

Health and Safety Code, Section 7050.5, declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbance must cease and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

California Penal Code, Section 622.5

The California Penal Code, Section 622.5, provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands, but specifically excludes the landowner.

Public Resources Code, Section 5097.5

PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

Local

Kern County General Plan

The project would be subject to applicable policies and measures of the Kern County General Plan. The Land Use, Open Space, and Conservation Element of the Kern County General Plan include the following policies and implementation measures related to cultural resources that would apply to the project. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature. Therefore, they are not listed below, but, as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference:

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

Section 1.10.3. Archaeological, Paleontological, Cultural, and Historical Preservation

Policy

- **Policy 25.** The County will promote the preservation of cultural and historic resources that provide ties with the past and constitute a heritage value to residents and visitors.

Implementation Measures

- **Measure K.** Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.
- **Measure L.** The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.
- **Measure M.** In areas of known paleontological resources, the County should address the preservation of these resources where feasible.
- **Measure N.** The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.
- **Measure O.** On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.

Southern Kern Industrial Center Specific Plan (SKICSP)

The project site is located within the SKICSP, which was most recently amended June 22, 2021 (SPA 159 Map 500). The purpose of the SKICSP is to be used as a planning tool to closely define the planning criteria of the specific plan area and to define the nature and extent of growth and to ensure orderly development. The SKICSP was designed to achieve three primary goals, implement the Kern County General Plan, establish of development standards, and guide the planned development of the SKIC.

The SKICSP includes a total of 744 acres and is intended to be the primary growth and development implementation tool for the defined area. The SKICSP is intended to provide for the orderly development of the plan area and address particular issues and concerns unique to the area and sites within, such as the proposed project. The SKICSP is internally consistent with the Kern County General Plan and incorporates the County-wide General Plan goals and policies, and by addressing the mandatory General Plan elements. Accordingly, the land use designation within SKICSP is predominantly heavy industrial.

The SKICSP was designed to achieve three primary goals; implement the Kern County General Plan, establish of development standards, and guide the planned industrial development of the SKIC. The SKICSP contains general goals related to orderly growth and development, coordinated development and includes specific policies related to the protection of archaeological resources. These policies relate to inadvertent discovery and development of mitigation and protection of both known and unknown resources. Accordingly, the applicable policies within the SKICSP, are consistent with those contained in the applicable policies, goals, and implementation measures of the Kern County General Plan. Applicable policies related to cultural resources SKICSP and are shown below:

General Overview from the SKICSP

- **Policy 12:** Should any archaeological or historic resource be unearthed during construction, work shall be halted in the area of the discovery until the finds can be assessed by a qualified and certified archaeologist, approved by the County of Kern, so that appropriate mitigation measures to preserve the find can be carried out.

Environmental Resources Management Goals and Polices from the SKICSP

- **Policy 8:** Archaeologically, culturally, and biologically sensitive areas shall be protected, wherever feasible.
- **Implementation Measure 23:** Should any archaeological or historic resources be unearthed during construction, work shall be halted in the area of the discovery until the finds can be assessed by a qualified and certified archaeologist, approved by the County of Kern, so that appropriate mitigation measures to preserve the find can be carried out.
- **Implementation Measure 24:** If archaeological sites are found on the project site, the archaeologist shall report evidence to the California Archaeological Inventory Information Center-South Central Office.

4.5.4 Impacts and Mitigation Measures

This section describes the methodology used in conducting the impact analysis for cultural and tribal cultural resources, the thresholds of significance used in assessing impacts to cultural and tribal cultural resources, and the assessment of impacts to cultural and tribal cultural resources, including relevant mitigation measures.

Methodology

This analysis is based on the County-wide cultural and paleontological information that is publicly available. The evaluation of the project's potential effects on significant cultural resources is at the program level. This EIR sets forth research criteria and report content needed to enable a project-level evaluation of resource occurrences. Any individual projects resulting from this proposed project would be required to undergo a separate CEQA evaluation pertaining to project-specific details and would be required to adhere to the research criteria and report content set forth herein.

Thresholds of Significance

According to CEQA Guidelines, California Code of Regulations (CCR) Title 14, 15064.5, a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment (CCR Title 14, 15064.5(b)). The guidelines further state that a substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historic resource would be materially impaired. Actions that would materially impair the significance of a historical resource are any actions that would demolish or adversely alter those physical characteristics of a historical resource that convey its historical significance and qualify it for inclusion in the CRHR or in a local register or survey that meet the requirements of PRC Sections 5020.1(k) and 5024.1(g).

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in CEQA Guidelines Appendix G, to determine if a project could potentially have a significant adverse effect on cultural resources.

A project would have a significant adverse effect on cultural resources if it would:

- a. Cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.4;
- b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.4; or
- c. Disturb any human remains, including those interred outside of dedicated cemeteries.

Impacts to tribal cultural resources have been addressed in **Section 4.16, Tribal Cultural Resources**, of this EIR.

The lead agency determined in the NOP/IS (see Appendix A) that the following environmental issues areas resulted in no impact and were scoped out of requiring further review in this Draft EIR. Please refer to Appendix A of this Draft EIR for a copy of the NOP/IS and additional information regarding the following impacts:

- c. Disturb any human remains, including those interred outside of formal cemeteries; or

The archaeological assessment in the EIR prepared for the SKICSP adopted in 1992 noted that a reported prehistoric burial ground is located adjacent to the specific plan boundaries but has not been formally recorded as a site. No human remains were identified on the project site. Also, the existing composting facility has been in active operation on the site since 2006 and the entire project site is extensively disturbed and considered mostly developed. Additionally, the proposed amendment to the CUP are not anticipated to disturb any human remains, however, further analysis is provided below.

Project Impacts and Mitigation Measures

Impact 4.5-1: The Project Would Cause a Substantial Adverse Change in the Significance of a Historical Resource as Defined in Section 15064.5.

Both the 1992 EIR and the 2002 SEIR prepared for the SKICSP did not identify any change in the significance of a historical resource within the project site. Since that time, the conditions of the site related to cultural resources and potential presence of historical or archaeological resources pursuant to Section 15064.5 has not changed. The existing composting facility has been in active operation on the site since 2006 and the entire project site is extensively disturbed and developed or used for composting related activities. It is unlikely that any previously recorded historical resources will be identified at the site.

The proposed project consists of a modification to the existing CUP that would allow for the existing South Kern Compost Manufacturing Facility to receive additional feedstock as well as digestate in response to AB 1826, SB 1383, CalRecycle, and California State Water Resources Control Board; installation of new equipment to be used during pre-processing and post composting operations including, but not limited to grinders, electrical screens, etc.; increase pile heights from 15 feet to 20 feet; and increase storage time of finished compost product from 7 to 180 days. The

proposed project would not affect any existing structures and includes installation of new equipment and composting on the previously disturbed adjacent areas or the ability to expand into the undeveloped 56 acres that make-up the 100-acre composting site approved as part of the existing CUP. The majority of construction efforts would include surficial earthmoving to enable use of the previously disturbed adjacent site. Excavation and grading would be minimal and needed for placement of new machinery and equipment. Earthmoving and grading would not disturb a substantial volume of soil or require substantial excavation.

The project site is located in the general vicinity of the Buena Vista Lake Bed, which is an archaeologically sensitive area. Although the project is proximate to this location, due to the history of past disturbances and limited grading and excavation, it is considered unlikely that any previously buried and unknown historical or archaeological resources would be inadvertently discovered. However, there is a possibility that buried archaeological deposits that would qualify as an historical resource pursuant to CEQA may be encountered during project-related ground disturbing activities. Therefore, because the project site is underlain by an area that may have buried historical resources and impacts are considered potentially significant. In the event that unknown historical resources are discovered during project related construction activities the inadvertent discovery protocol as required by the listed mitigation would be implemented and resources would be protected in accordance with a local, State, and federal requirements. Impacts would be mitigated to less than significant through the implementation of Mitigation Measure **MM 4.5-1**.

Mitigation Measures

MM 4.5-1: During implementation of the project, in the event archaeological materials are encountered, the project contractor shall cease any ground disturbing activities within 50 feet of the find. The area of the discovery shall be marked off by temporary fencing that encloses a 50-foot radius from the location of discovery. Signs shall be posted that establish it as an Environmentally Sensitive Area and all entrance to the area shall be avoided until the discovery is assessed by a qualified Archaeologist, as well as a Native American monitor. The Lead Archaeologist, in consultation with the Native American monitor, shall evaluate the significance of the resources and recommend appropriate treatment measures. If further treatment of the discovery is necessary, the Environmentally Sensitive Area shall remain in place until all work is completed. Per California Environmental Quality Act Guidelines Section 15126.4(b)(3), project redesign and preservation in place shall be the preferred means to avoid impacts to significant historical resources.

Consistent with California Environmental Quality Act Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the Lead Archaeologist in consultation with the Native American monitor shall develop additional treatment measures in consultation with the County, which may include data recovery or other appropriate measures. The County shall consult with appropriate Native American representatives in determining appropriate treatment for unearthened cultural resources if the resources are prehistoric or Native American in nature. Diagnostic archaeological materials with research potential recovered during any investigation shall be curated at an accredited curation facility. The Lead Archaeologist, in consultation with a designated Native American monitor, shall prepare a report documenting evaluation and/or additional treatment of the resource. A copy of the report shall be provided

to the Kern County Planning and Natural Resources Department and to the southern San Joaquin Valley Information Center at California State University, Bakersfield.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.5-1**, impacts would be less than significant.

Impact 4.5-2: The Project Would Cause a Substantial Adverse Change in the Significance of a Unique Archaeological Resource as Defined in Section 15064.5.

As discussed above, both the 1992 EIR and the 2002 SEIR for the SKICP did not identify any change in the significance of a historical resource within the project site. Since that time, the conditions of the site related to cultural resources and potential presence of historical or archaeological resources pursuant to Section 15064.5 has not changed. The existing composting facility has been in active operation on the site since 2006 and the entire composting site and surrounding project area is extensively disturbed and developed or used for composting related activities or was used for past agricultural operations. As noted above, no archaeological resources have been identified within the project site. The project site, however, has the potential to contain archaeologically sensitive resources due to proximity with the Buena Vista Lake Bed. Although it is considered unlikely, there is a possibility that buried archaeological resources that would qualify as a protected resource pursuant to CEQA may be encountered during project-related ground disturbing activities. This impact is considered potentially significant. In the event that unknown subsurface archaeological resources are discovered during project related construction activities the inadvertent discovery protocol as required by Mitigation Measure **MM 4.5-1**, would be implemented and resources would be protected in accordance with local, State, and federal requirements. Impacts would be mitigated to less than significant through the implementation of Mitigation Measure **MM 4.5-1**.

Mitigation Measures

Implement Mitigation Measure **MM 4.5-1**.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.5-1**, impacts would be less than significant.

Impact 4.5-3: The project would disturb human remains, including those interred outside of formal cemeteries.

There is no indication that any particular location within the project area has been used for human burial purposes in the recent or distant past. However, in the event that human remains are inadvertently discovered during project construction activities, the human remains could be damaged or disturbed, which would be a significant impact. Implementation of Mitigation Measure **MM 4.5-2** would ensure that any human remains encountered during Project implementation are properly treated, thus reducing impacts to a less-than-significant level.

Mitigation Measures

MM 4.5-2: If human remains are uncovered during project construction, the project contractor shall immediately halt work within 100 feet of the find, contact the Kern County Coroner to

evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5(e)(1) of the California Environmental Quality Act Guidelines. If the County Coroner determines that the remains are Native American, the coroner shall contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5(c), and Public Resources Code 5097.98 (as amended by Assembly Bill 2641). The Native American Heritage Commission shall designate a Most Likely Descendent for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendent regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et seq.) directing identification of the next-of-kin will apply.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.5-2**, impacts would be less than significant.

Cumulative Setting, Impacts and Mitigation Measures

An analysis of cumulative impacts takes into consideration the entirety of impacts that the 59 projects listed in **Table 3-4** in **Chapter 3, Project Description**, of this EIR, would have on cultural resources. The geographic area of analysis of cumulative impacts for cultural resources includes the Southern San Joaquin Valley, which includes the southwest portion Kern County. This geographic scope of analysis is appropriate because the archaeological, and historical resources within this area are expected to be similar to those that occur on the project site because of their proximity, and because the similar environments, landforms, and hydrology would result in similar land-use and thus, site types. Further, this is a large enough area to encompass any effects of the project on cultural resources that may combine with similar effects caused by other past, current, and reasonably foreseeable future projects, and provides a reasonable context wherein cumulative actions could affect cultural resources. Multiple projects are proposed throughout the Southern San Joaquin Valley. Cumulative impacts to cultural resources in the Southern San Joaquin Valley could occur if other projects, in conjunction with the project, had or would have impacts on cultural resources that, when considered together, would be significant.

Development of the proposed project, in combination with other projects in the area, has the potential to contribute to a cumulatively significant cultural resources impact due to the potential loss of historical and archaeological resources unique to the region. However, mitigation measures are included in this EIR to reduce potentially significant impacts to unknown archaeological resources that could be encountered during project implementation. Mitigation Measure **MM 4.5-1** requires appropriate treatment of uncovered archaeological resources, including those that qualify as historical resources. Implementation of these mitigation measures would reduce the project's incremental potential impacts to historical and archaeological resources to a less-than-significant level and ensure that project impacts to cultural resources are not cumulatively considerable. Although project construction has the potential to disturb human remains, as do other projects in

the cumulative study area, the implementation of Mitigation Measure **MM 4.5-2** would ensure that appropriate laws and protocols are followed with regard to identifying and handling remains and ensure that cumulative impacts are not significant.

With implementation of Mitigation Measures **MM 4.5-1** and **MM 4.5-2**, as described above, the project would not result in significant impacts to cultural resources. Given this minimal impact, as well as similar mitigation requirements for other projects in the Southern San Joaquin Valley, project's incremental effect is not cumulatively considerable when viewed in connection with the effects of other closely related past projects, the effects of other current projects and the effects of probable future projects and thus cumulative impacts to cultural resources would be less than significant.

Mitigation Measures

Implementation of Mitigation Measures **MM 4.5-1** and **MM 4.5-2** would be required.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.5-1** and **MM 4.5-2**, cumulative impacts would be less than significant.

Section 4.6 Energy

4.6.1 Introduction

This section of the Draft Environmental Impact Report evaluates potential energy impacts associated with implementation of the proposed project. The analysis in this section relies on some information previously discussed and disclosed in **Section 4.3, *Air Quality*** and **Section 4.8, *Greenhouse Gas (GHG) Emissions***, which in part analyzes GHGs emitted from use of energy. The analysis in this Section considers whether implementation of the proposed project would result in wasteful, and unnecessary consumption of energy. This analysis considers the electricity, natural gas, and transportation fuel (petroleum) demands of the project, as well as potential service delivery impacts. This section also includes, if needed, where appropriate and feasible mitigation measures.

This section provides the content and analysis required by Public Resources Code Section 21100(b)(3) and described in CEQA Guidelines Appendix F (California Natural Resources Agency, 2018). Public Resources Code Section 21100(b) and CEQA Guidelines Section 15126.4 require that an EIR identify mitigation measures to minimize a project's significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F states that the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the Project Description, Environmental Setting, and Impact Analysis portions of technical sections, as well as through mitigation measures and alternatives.

In late 2018, the California Natural Resources Agency finalized updates to the 2018 CEQA Guidelines (California Natural Resources Agency, 2018). Appendix G was amended to now include the analysis of energy. Previously included in Appendix F, the Appendix G Checklist now provides questions asking if a project could result in wasteful energy resource consumption during project construction or operation and whether the project conflicts with state or local renewable energy or energy efficiency plans (California Natural Resources Agency, 2018).

4.6.2 Environmental Setting

Kern County possesses a wealth of existing and potential energy resources. The County's role as a major oil, natural gas, and electricity producer, along with its geographic position at the heart of California and on the boundaries of the State's largest gas and electric utilities, gives the County's future energy development Statewide significance.

Electricity

Electricity, a consumptive utility, is a manmade resource. The production of electricity requires the consumption or conversion of energy resources—which may include water, wind, oil, gas, coal, solar, geothermal, and nuclear resources—into energy. The delivery of electricity involves several system components for distribution and use. The electricity generated is distributed through a network of transmission and distribution lines, commonly called a power grid.

Energy capacity, or electrical power, is generally measured in watts (W), while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If 10 100-W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is 1 million W, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is 1 billion Wh.

California generated approximately 277,704 gigawatt hours (GWh) of electricity in 2019, which was down 2.7 percent, or 7,784 GWh from 2018 (CEC, 2019) according to the most recent year of available data. Of this total, Kern County consumed 17,105 GWh (CEC, 2019b). Of the energy generated approximately 5,851 GWh (2.44%) were generated from Biomass. In 2019, the California electricity mix included natural gas (42.97 percent), coal (0.12 percent), large hydroelectric plants (16.53 percent), nuclear (8.06 percent), oil (0.02 percent), petroleum coke/waste heat (0.2 percent) and unspecified sources of power (0.00 percent). The remaining 32 percent was supplied from renewable resources, such as wind, solar, geothermal, biomass, and small hydroelectric facilities (CEC, 2019a). According to the U.S. Energy Information Administration (EIA), in 2019, the state consumed 2,217,200 million cubic feet of natural gas (EIA, 2019).

Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, however, California's electrical system has become more reliant on renewable energy sources, including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, generation of electricity is usually not tied to the location of the fuel source and can be delivered great distances through the electrical grid. Electricity supply in California involves a complex grid of power plants and transmission lines located in the western United States, Canada, and Mexico. Almost 32 percent of the electricity used in California is imported from 11 other western states, as well as Canada and Mexico. The issue is complicated by market forces that have become prominent since 1998, when a new regulatory environment commonly referred to as "deregulation" took effect in California. Supply is further complicated by the fact that the peak demand for electricity is significantly higher than the off-peak demand. For example, in August 2004, peak electric demand—due in large part to hot weather—reached a record high of 44,497 MW, which is almost double the lowest demand period.

Retail electric service in Kern County is split between Pacific Gas and Electric (PG&E) and Southern California Edison (SCE). PG&E's retail service is concentrated in western Kern County while SCE serves the east County area.

PG&E currently provides electricity to the majority of Central and Northern California, including the western half of Kern County and the project area. PG&E obtains its energy supplies from power plants and natural gas fields in Northern California, as well as from energy purchased outside its service area and delivered through high-voltage transmission lines and pipelines. Power is generated from various sources, including fossil fuel, hydroelectric, nuclear, wind, solar, biomass, and geothermal plants, and is fed into the electrical grid system serving its service territory. The electricity power mix for deliveries statewide was 38.9% eligible renewable, 33.5% nuclear, 14.9% natural gas, and 12.7% hydroelectric (PG&E, 2020).

The electricity consumption attributable to Kern County from 2009 to 2019 is shown in **Table 4.6-1, *Electricity Consumption in Kern County 2009-2019***. As indicated in **Table 4.6-1**, electricity consumption remained relatively constant between 2008 and 2019.

Table 4.6-1: *Electricity Consumption in Kern County 2009-2019*

Year	Electricity Consumption (in millions of kilowatt hours)
2019	17,105
2018	15,917
2017	18,492
2016	16,547
2015	15,182
2014	14,324
2013	15,059
2012	16,704
2011	15,951
2010	14,954
2009	14,439
Total Usage	174,679

Source: CEC, Electricity Consumption by County, 2019 and 2009.

PG&E operates one of the largest natural gas distribution networks in the country, including approximately 42,142 miles of natural gas transmission and distribution pipelines (PG&E, 2020). In all, PG&E delivers gas to approximately 4.4 million customer accounts and approximately 5.1 million electric customer accounts in Northern and Central California, including in Kern County.

Natural Gas

The natural gas consumption in Kern County from 2009 to 2019 is shown in **Table 4.6-2, *Natural Gas Consumption in Kern County 2009-2019***. Similar to electricity consumption, natural gas consumption in Kern County remained relatively constant between 2009 and 2019, with no substantial increase.

The California Public Utilities Commission (CPUC) regulates California natural gas rates and natural gas services, including in-state transportation over transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins.

California's regulated utilities do not own any natural gas production facilities. All natural gas sold by these utilities must be purchased from suppliers or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the Federal Energy Regulatory Commission in the mid-1980s and is determined by market forces. However, the CPUC decides whether California's utilities have taken reasonable steps to minimize the cost of natural gas purchased on behalf of its core customers.

Table 4.6-2: Natural Gas Consumption in Kern County 2009-2019

Year	Natural Gas Consumption (in millions of therms)
2019	2,417
2018	2,455
2017	2,397
2016	2,520
2015	2,761
2014	2,714
2013	2,696
2012	2,325
2011	2,375
2010	2,326
2009	2,497
Total Usage	27,489

Source: CEC, Natural Gas Consumption by County, 2019 and 2009.

As indicated in the preceding discussion, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available through existing delivery systems, thereby increasing the availability and reliability of resources.

Existing Infrastructure

The project site is within Pacific Gas and Electric Company (PG&E) service area. Electric power supply and distribution and natural gas for the proposed project area is furnished by PG&E. Existing electrical lines are located adjacent to Santiago Road and the site is served by existing underground natural gas lines. Tie-ins to these lines extend service into the project site.

Transportation Fuels

Automotive fuel consumption in Kern County from 2009 to 2019 is shown in **Table 4.6-3, Automotive Fuel Consumption in Kern County 2009-2019**. As shown in **Table 4.6-3**, on-road automotive fuel consumption in Kern County has generally decreased between 2009 and 2019, with annual increases in some individual years. Heavy-duty vehicle fuel consumption has been increasing since 2009.

Table 4.6-3: Automotive Fuel Consumption in Kern County 2009-2019

Year	On-Road Automotive Fuel Consumption (Gallons)	Heavy-Duty Vehicle/Diesel Fuel Consumption (Gallons)
2009	375,207,000	209,973,000
2010	377,703,000	210,605,000
2011	373,906,000	213,073,000
2012	375,278,000	213,932,000
2013	377,878,000	230,765,000
2014	383,078,000	235,593,000
2015	392,909,000	238,105,000
2016	398,562,000	251,819,000
2017	387,936,000	254,394,000
2018	379,800,000	257,900,000
2019	372,168,000	260,911,000

Source: California Air Resources Board, EMFAC2019.

4.6.3 Regulatory Setting

Federal, state, and local agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation, the U.S. Department of Energy, and the U.S. Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, the CPUC and CEC are two agencies with authority over different aspects of energy. Relevant federal, state, and local energy-related regulations are summarized below.

Federal

National Energy Policy and Conservation Act

The National Energy Conservation Policy Act serves as the underlying authority for Federal energy management goals and requirements. Signed into law in 1975, it has been regularly updated and amended by subsequent laws and regulations. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer’s average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Policy Act of 2005

The Energy Policy Act of 2005 sets equipment energy efficiency standards and seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the Act, consumers and businesses can attain Federal tax credits for purchasing fuel-efficient appliances and products, including hybrid vehicles; constructing energy-efficient buildings; and improving the energy efficiency of commercial buildings. Additionally, tax

credits are available for the installation of qualified fuel cells, stationary micro-turbine power plants, and solar power equipment.

Energy and Independence Security Act of 2007

The Energy and Independence Security Act of 2007 sets Federal energy management requirements in several areas, including energy reduction goals for Federal buildings, facility management and benchmarking, performance and standards for new buildings and major renovations, high-performance buildings, energy savings performance contracts, metering, energy-efficient product procurement, and reduction in petroleum use and increase in alternative fuel use. This act also amends portions of the National Energy Policy and Conservation Act. In addition to setting increased Corporate Average Fuel Economy standards for motor vehicles, the EISA includes the following other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, the Bush Administration issued Executive Order 13432 in 2007 directing the U.S. Environmental Protection Agency (USEPA), U.S. Department of Energy (USDOE), and U.S. Department of Transportation (USDOT) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009 the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency for GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

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

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

State

Warren-Alquist Act of 1974 and California Energy Commission

In 1974 the Warren-Alquist Act established the California Energy Commission (CEC). The first five commissioners were appointed in 1975 by Governor Edmund G. Brown, Jr. The CEC serves as the state's primary energy policy and planning agency and is committed to reducing energy costs and environmental impacts of energy use, such as GHG emissions. The commission is also responsible for ensuring a safe, resilient, and reliable supply of energy for California.

Senate Bill 1389

Senate Bill (SB) 1389 (Public Resources Code Sections [PRC] 25300–25323) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (PRC Section 25301[a]). The 2016 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California, including energy efficiency, strategies related to data for improved decisions in the Existing Buildings Energy Efficiency Action Plan, building energy efficiency standards, the impact of drought on California's energy system, achieving 50 percent renewables by 2030, the California Energy Demand Forecast, the Natural Gas Outlook, the Transportation Energy Demand Forecast, Alternative and Renewable Fuel and Vehicle Technology Program benefits updates, update on electricity infrastructure in Southern California, update on trends in California's sources of crude oil, update on California's nuclear plants, and other energy issues.

Assembly Bill (AB) 32 and Senate Bill 32

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006." AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Reductions in overall energy consumption have been implemented to reduce emissions. See **Section 4.8**, *Greenhouse Gas Emissions*, for a further discussion of AB 32.

In September 2016, the Governor signed into legislation SB 32, which builds on AB 32 and requires the state to cut GHG emissions to 40 percent below 1990 levels by 2030. With SB 32, the Legislature also passed AB 197, which provides additional direction for updating the Scoping Plan to meet the 2030 GHG reduction target codified in SB 32. CARB has published a draft update to the Scoping Plan and has received public comments on this draft but has not released the final version.

Additional energy efficiency measures beyond the current regulations are needed to meet these goals as well as the AB 32 greenhouse gas (GHG) reduction goal of reducing statewide GHG emissions to 1990 levels by 2020 and the SB 32 goal of 40 percent below 1990 levels by 2030 (see **Section 4.8**, *Greenhouse Gas Emissions*, for a discussion of AB 32 and SB 32). Part of the effort in meeting California's long-term reduction goals include reducing petroleum use in cars and trucks by 50

percent, increasing from one-third to more than one-half of California's electricity derived from renewable sources, doubling the efficiency savings achieved at existing buildings and making heating fuels cleaner; reducing the release of methane, black carbon, and other short-lived climate pollutants, and managing farm and rangelands, forests, and wetlands so they can store carbon.

2008 California Energy Action Plan Update

The 2008 Energy Action Plan Update provides a status update to the 2005 Energy Action Plan II, which is the State's principal energy planning and policy document (CPUC and CEC, 2008). The plan continues the goals of the original Energy Action Plan, describes a coordinated implementation plan for State energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. First-priority actions to address California's increasing energy demands are energy efficiency, demand response (i.e., reduction of customer energy usage during peak periods in order to address system reliability and support the best use of energy infrastructure), and the use of renewable sources of power. If these actions are unable to satisfy the increasing energy and capacity needs, the plan supports clean and efficient fossil-fired generation.

Executive Order B-30-15; Senate Bill 100 and 350

In April 2015, the Governor issued Executive Order B-30-15, which established a GHG reduction target of 40 percent below 1990 levels by 2030. SB 350 (Chapter 547, Statutes of 2015) advanced these goals through two measures. First, the law increases the renewable power goal from 33 percent renewables by 2020 to 50 percent by 2030. Second, the law requires the CEC to establish annual targets to double energy efficiency in buildings by 2030. The law also requires the California Public Utilities Commission (CPUC) to direct electric utilities to establish annual efficiency targets and implement demand-reduction measures to achieve this goal. In 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

Renewable Portfolio Standard

In 2002, California established its Renewable Portfolio Standard program with the goal of increasing the annual percentage of renewable energy in the state's electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (Public Utilities Code Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the California Air Resources Board under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, the California Air Resources Board adopted its Renewable Electricity Standard regulations, which require all of the state's load-serving entities to meet this target. In October 2015, then-Governor Jerry Brown signed into legislation Senate Bill 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Signed in 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve

a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

California Environmental Quality Act

In accordance with CEQA and Appendix F, Energy Conservation, of the 2021 CEQA Guidelines, and to assure that energy implications are considered in project decisions, EIRs are required to include a discussion of the potential significant energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. CEQA Guidelines Appendix F provides a list of energy-related topics to be analyzed in the EIR. In addition, while not described or required as significance thresholds for determining the significance of impacts related to energy, Appendix F provides the following topics for consideration in the discussion of energy use in an EIR, to the extent the topics are applicable or relevant to the project:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;
- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources; and
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

In late 2018, the California Natural Resources Agency finalized updates to the 2018 CEQA Guidelines (California Natural Resources Agency, 2018). Appendix G was amended to now include the analysis of energy. Previously included in Appendix F, the Appendix G Checklist now provides energy criteria for the analysis of wasteful energy consumption and conflicts with state or local energy efficiency plans (California Natural Resources Agency, 2021). Appendix F did not describe or require significance thresholds for determining the significance of impacts related to energy. According to the updated Appendix G Checklist, Issue VI. Energy, a project would have a significant impact on energy and energy resources if it would:

- a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Local

Kern County General Plan Energy Element

The Kern County General Plan Energy Element primarily discusses the County's wealth of existing and potential energy resources which include oil, natural gas, and renewable electricity producer. The Energy Element has three objectives: resource management and protection; establishing development standards to provide for the protection of the environment, public health, and safety; and promoting

and facilitating energy development. However, the policies listed in the Energy Element are primarily directed at the County and are municipal policies rather than project specific.

Southern Kern Industrial Center Specific Plan (SKICSP)

The project site is located within the SKICSP, which was most recently amended June 22, 2021 (SPA 159 Map 500). The purpose of the SKICSP is to be used as a planning tool to closely define the planning criteria of the specific plan area and to define the nature and extent of growth and to ensure orderly development. The SKICSP was designed to achieve three primary goals: 1) implement the Kern County General Plan, 2) establish of development standards, and 3) guide the planned development of the SKIC.

The SKICSP includes a total of 744 acres and is intended to be the primary growth and development implementation tool for the defined area. The SKICSP is intended to provide for the orderly development of the plan area and address particular issues and concerns unique to the area and sites, such as the proposed project, within. The SKICSP is internally consistent with the Kern County General Plan and incorporates the County-wide General Plan goals and policies, and by addressing the mandatory General Plan elements. Accordingly, the land use designation within SKICSP mirror those of the existing.

There are no specific energy related policies and measures contained in the SKICSP Plan that are applicable to the project. In Kern County, specific plans are used to implement goals, objectives, and policies of the General Plan in a more detailed and refined manner unique to a smaller area of the County. Since there are no applicable goals, policies, or implementation measures within the SKICSP, refer to the applicable policies, goals, and implementation measures of the Kern County General Plan above.

4.6.4 Impacts and Mitigation Measures

This section describes energy consumption on three sources of energy that are relevant to the proposed project: electricity, natural gas, and transportation fuel for vehicle trips associated with new development, as well as fuel necessary for project construction.

Methodology

In determining whether implementation of the Project would result in the inefficient, wasteful or unnecessary consumption of fuel or energy, this analysis considers the recommendations of Appendix F (as described above), which states that environmental impact analyses of energy conservation may include:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials maybe discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The degree to which the project complies with existing energy standards.

4. The effects of the project on energy resources.
5. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

This section analyzes energy consumption on three sources of energy that are relevant to the proposed project: electricity, natural gas, and transportation fuel for vehicle trips associated with the new equipment and machinery, and transportation of expanded feed stocks.

- The analysis of project electricity/natural gas usage is based on California Emissions Estimator Model (CalEEMod) modeling, which quantifies energy use for occupancy. The results of the CalEEMod modeling are included in Appendix B (Air Quality and GHG Data).

Modeling related to transportation fuel consumption was based primarily on the default settings in the computer program for Kern County. The amount of operational fuel use was estimated using CalEEMod outputs for the proposed project and the California Air Resources Board's Emissions Factor 2017 (EMFAC2017) computer program for typical daily fuel usage in Kern County. Air Quality Impact Analysis (AQIA) and CalEEMod modeling have been prepared by Insight Environmental and Trinity Consultants in July 2020. Construction fuel consumption was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry. The results of EMFAC2017 modeling and construction fuel estimates are included in Appendix B Air Quality and GHG Data.

Calculations of energy and electricity uses also is related to water consumption, specifically for dust control. Electricity use associated with water use for construction dust control is calculated based on total water use and the energy intensity for supply, distribution, and treatment of water. The total number of gallons of water usage is calculated based on acreage disturbed during grading and site preparation, as well as the daily water consumption rate per acre disturbed.

- The total acres disturbed are calculated using the methodology described in Chapter 4.2 of Appendix A of the CalEEMod® User's Guide (Grading Equipment Passes).
- The water application rate of 3,020 gallons per acre per day is from Air and Waste Management Association's Air Pollution Engineering Manual.
- The energy intensity value is based on the CalEEMod® default energy intensity per gallon of water for Kern County.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify, per Appendix G of the State CEQA Guidelines, a project would have a significant impact on energy and energy resources if it would:

- a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- b. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

The analysis below generally follows Appendix F of the State CEQA Guidelines, which states that the goal of conserving energy includes decreasing overall per capita energy consumption; decreasing reliance on fossil fuels such as coal, natural gas, and oil; and increasing reliance on renewable energy.

Project Impacts and Mitigation Measures

Impact 4.6-1: The Project Would Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources, During Project Construction or Operation.

Construction (Short-Term)

The energy consumption associated with installation of new equipment and machinery needed to process the feed stocks would include minor amounts of electricity usage, fuel consumption for construction diesel and gasoline powered equipment, and fuel consumption from on-road worker commute and transportation of the new machinery. The site is already operational, the addition of the proposed uses that would be allowed by approval of the conditional use permit Modification would not require a substantial increase in any existing utility infrastructure and would not result in a substantial increase in demand for electricity to power the equipment. Accordingly, the amount of electricity used during construction would be minimal and would typically stem from the use of electrically powered hand tools needed to assembly the equipment and would be temporary and minimal. The demand for petroleum and associated energy used during construction would be from transportation of the machinery to be installed and worker trips.

The methodology for each category is discussed above. This analysis relies in part on the construction equipment list and operational characteristics, as stated in **Chapter 4.3, Air Quality** and **Chapter 4.8, Greenhouse Gas Emissions**, as well as, Appendix B - Air Quality Impact Analysis of this Draft EIR. Quantifications of energy consumption are provided for the proposed project, followed by an analysis of impacts based on those quantifications.

Water Usage

As summarized in **Table 4.6-5, Project Energy Consumption During Construction**, the total electricity consumption associated with water consumption for construction dust control would be approximately 6,710 kWh (6.71 megawatt hours [MWh]) over the duration of buildout of the proposed project.

Petroleum Fuel Usage

On-Road Diesel Construction Trips

The diesel usage associated with on-road construction mobile trips is calculated based on vehicle miles traveled (VMT) from vehicle trips (i.e., worker, vendor, and hauling), the CalEEMod default diesel fleet percentage, and vehicle fuel efficiency in miles per gallon. Fuel consumption is based on VMT for the entire construction period. Construction fuel consumption was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry. The CalEEMod emissions are specific to construction year and include fleet adjustments based on current regulations and equipment turnover.

As summarized in **Table 4.6-4, Project Energy Consumption During Construction**, the total diesel consumption associated with on-road construction trips would be approximately 356 gallons needed for installation of new equipment needed for expansion of materials that can be accepted by the existing composting facility.

Off-Road Diesel Construction Trips

The construction diesel usage associated with the off-road construction equipment is calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry. As summarized in **Table 4.6-4**, the total diesel consumption associated with off-road construction equipment is approximately 46,104 gallons for duration of buildout the proposed project.

Gasoline Usage

As discussed above, the proposed project would result in minimal increased energy demand needed to install the new machinery and equipment. Construction would include the use of minimal fuels and electricity to operate equipment and machinery to install the improvement, employee vehicles would be used to transport workers to and from the project site, operation of hand tools, and other common equipment.

The proposed improvements also would include gasoline usage associated with on-road construction mobile trips. This is calculated based on VMT from vehicle trips (i.e., worker, vendor, and hauling) using the CalEEMod default gasoline fleet percentage and vehicle fuel efficiency in miles per gallon using the same methodology as the construction on-road trip diesel usage calculation discussed above. As summarized in **Table 4.6-4**, the total gasoline consumption associated with on-road construction trips would be approximately 1,915 gallons over the duration of buildout the proposed project.

As indicated in the environmental setting above, Kern County consumed 17,105,000 MWh of electricity in 2019 (CEC, 2019). The proposed project would consume approximately 7 MWh of electricity, which would represent approximately 0.000041percent of the County's electricity use. This consumption would cease upon completion of construction activities. Therefore, it is anticipated that construction electricity consumption associated with the proposed project would not be inefficient, wasteful, or unnecessary.

Additionally, Kern County consumed approximately 372,168,000 gallons of gasoline and 260,911,000 gallons of diesel fuel over the same time-period. Kern County occupies approximately 8,163 square miles and has a population of 917,553 people (CDOF, 2020). The proposed project would occupy approximately 0.16 square miles and would employ 60 employees at build out. The proposed project would require the consumption of approximately 46,460 gallons of diesel and 1,915 gallons of gasoline. As described above, the proposed project's fuel from the entire construction period would increase fuel use in Kern County by approximately 0.0178 percent for diesel and 0.0005 percent for gasoline. Based on the total project's very low construction fuel use proportional to annual State and County use, the installation of the machinery and equipment would not substantially affect existing energy fuel supplies or resources. Additionally, use of construction fuel would cease once the new equipment is installed. As such, work needed to expand the acceptable fuel stocks would have a nominal effect on the local and regional energy supplies.

Therefore, it is anticipated that construction fuel consumption associated with the proposed project would not be inefficient, wasteful, or unnecessary. The proposed project would not substantially affect existing energy or fuel supplies, or resources and new capacity would not be required, and impacts would be less than significant in this regard.

Table 4.6-4: Project Energy Consumption During Construction

Source	Project Construction Usage	Kern County Annual Energy Consumption	Percentage Increase Countywide
Electricity Use		Megawatt Hours (MWh)	
Water Consumption ^a (MWh)	7	17,105,000	0.000041%
Diesel Use		Gallons	
On-Road Construction Trips ^b (gallons)	356	260,911,000	0.0001%
Off-Road Construction Equipment ^c (gallons)	46,104		0.0177%
Construction Diesel Total (gallons)	46,460		0.0178%
Gasoline		Gallons	
On-Road Construction Trips ^b (gallons)	1,915	372,168,000	0.0005%
Construction Gasoline Total (gallons)	1,915		0.0005%

Notes: a. Construction water use estimated based on acres disturbed per day per construction sequencing and estimated water use per acre (AWMA 1992).

b. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod and fleet-average fuel consumption in gallons per mile from EMFAC2017 in Kern County. Electricity demand based on VMT and calculated average electric vehicle fuel economy for 2015 models (in kWh per mile) from the DOE Fuel Economy Guide.

c. Construction fuel consumption was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry. Abbreviations: CalEEMod: California Emission Estimation Model; EMFAC: Emission Factor Model 2017; kWh: kilowatt-hour; MWh: megawatt-hour.

Sources: AWMA, 1992; DOE 2016; USEPA 1996.

Operations (Long-Term)

The energy consumption associated with operation of the proposed project and expanded feedstocks would include minimal increased demands for electricity, water, and natural gas usage, but the fuel usage from on-road vehicles used by employees to drive to and from the project site, and for the material hauling would be decreased. Note that this energy resources analysis is consistent with the analysis presented in **Chapter 4.3, Air Quality**, and **Chapter 4.8, Greenhouse Gas Emissions**.

Based on calculations included in the Air Quality Impact Analysis (AQIA) and technical memorandum prepared for the project by Trinity Consultants and included as Appendix B, operations-related non-stationary source emissions, would decrease compared to baseline emissions.

The project is proposing no changes to permitted tons processed, traffic counts, traffic patterns, technology, hours of operation, or permitted area. Permitted stationary source emissions are not anticipated to change as a result of the proposed project. While maintaining current process limits established by Kern County, the facility would adopt a flexible feedstock plan using biosolids and organic feedstocks, such as food materials, with bulking agents to address state mandates. The project would help meet the recently enacted State mandates to divert 75 percent of all organics from landfills by 2025. As noted in **Chapter 4.3, Air Quality**, and **Chapter 4.8, Greenhouse Gas Emissions**, operations-related to non-stationary source emissions would decrease compared to baseline emissions.

primarily due to cleaner and more fuel-efficient vehicles in the post-project period compared to the baseline period. These improvements would reduce fuel consumption. Therefore, proposed project operations would not affect existing energy or fuel supplies or resources. The project would comply with applicable energy standards and new capacity would not be required. Impacts would be less than significant in this regard and mitigation is not required.

Notwithstanding, the project also would implement Mitigation Measure **MM 4.3-5** described in **Section 4.3, Air Quality**, which would further ensure the project would not result in the inefficient, wasteful, or unnecessary use of energy resources. Air Quality. Mitigation Measure **MM 4.3-5** requires the project proponent and/or construction contractor to properly maintain equipment, turn off equipment when not in use, minimize time of operation, and use of proper equipment and emission controls and filters.

Mitigation Measures

Mitigation Measure **MM 4.3-5** would be implemented (see **Section 4.3, Air Quality**, of this EIR, for full mitigation measure text).

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.3-5**, impacts would be less than significant.

Impact 4.6-2: The Project Would Conflict with or Obstruct State or Local Plan for Renewable Energy or Energy Efficiency.

At the time of this writing, the Kern County does not have an adopted Energy Plan. Kern County does have an Energy Element in their General Plan, but focuses primarily on the County's energy resources and municipal measures such as encouraging the County to seek State and federal energy grants, have discussions with various energy industries. As noted above, the proposed project would not have any effect on these efforts, and it would provide the County with an expanded source of alternative energy.

The proposed project would not conflict with or obstruct the implementation of any state or local plan for renewable or energy efficiency. Implementation of the proposed project would not conflict with existing energy standards, including standards for energy conservation. As discussed, above, development of the proposed project would not cause inefficient, wasteful or unnecessary energy use, and impacts would be less than significant. Therefore, the project would not conflict with or obstruct State or regional plans and impacts would be less than significant and no mitigation would be required.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts and Mitigation Measures

Construction and operation associated with implementation of the proposed project would result in the minimal increases in the consumption of fuel and energy, and any increases would not be in a wasteful or inefficient manner. The consumption of fuel and energy would not be substantial in comparison to statewide electricity, natural gas, gasoline, and diesel demand and new capacity or supplies of energy resources would not be required. Additionally, the proposed project would be subject to compliance with all Federal, State, and local requirements for energy efficiency.

The anticipated project impacts, in conjunction with other composting facilities and cumulative development in the site vicinity, would be minimal as development in the area is very sparse. Cumulative increases from increased energy consumption would be minor. In addition, any future projects in the area would require a site-specific CEQA evaluation and this would be done on a case-by-case basis. Each cumulative project would be evaluated to address potential energy consumption impacts and identify necessary mitigation measures, where appropriate.

As noted above, the proposed project would not result in significant energy consumption impacts. The proposed project would not be considered inefficient, wasteful, or unnecessary with regard to energy consumption. Thus, the proposed project would not contribute considerably to cumulative energy consumption, and cumulative impacts would be less than significant.

Mitigation Measures

Mitigation Measure **MM 4.3-5** would be implemented (see **Section 4.3**, *Air Quality*, of this EIR, for full mitigation measure text).

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.3-5**, cumulative impacts would be less than significant.

Section 4.7

Geology and Soils

4.7.1 Introduction

This section of the Environmental Impact Report (EIR) describes regional geologic and soil characteristics of the project site and the potential geology and soil impacts associated with the implementation of the Synagro South Kern Compost Manufacturing Facility Project (proposed project). The proposed project would modify CUP No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) for the existing Synagro South Kern Compost Manufacturing Facility. The analysis in this section is largely based on publicly available information from the United States Geological Survey (USGS), United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS), the previously approved South Kern Industrial Center (SKIC) Specific Plan (SP) Environmental Impact Report (EIR), a 2001 geotechnical engineering investigation *Geotechnical Engineering Investigation and Soil Absorption Evaluation – Proposed South Kern Industrial Center* prepared by Krazan & Associates, 2001. Additional descriptions of erosion and sediment impacts on surface water (e.g., turbidity) and mitigation, as appropriate, are presented in **Section 4.10, Hydrology and Water Quality**.

Concepts and Terminology

Definitions of concepts and terminology applicable to this section are provided below.

Expansive Soils: These soils generally result from specific clay minerals that expand in volume when saturated and shrink in volume when dry. The presence of this soil type can damage structures when expansion and contraction of soil cracks rigid building materials (e.g., concrete, wood, drywall, etc.).

Faults: Faults are fractures in the crust of the earth along which land on one side has moved relative to land on the other side. Most faults are the result of repeated displacements over a long period of time. A fault trace is the line on the earth's surface defining the fault. Faults are classified as active, potentially active, and inactive based on criteria developed by the CGS, formerly known as the California Division of Mines and Geology. By definition, an active fault is one that has experienced surface displacement within the Holocene period (within the last 11,000 years), a potentially active fault is one that has experienced displacement within the Quaternary period (during the last 1.6 million years), and inactive faults are those that have not experienced movement in the last 1.6 million years.

Ground Shaking: The central and southern California regions are characterized by, and have a history of, faults and associated seismic activity. Earthquakes are classified by their magnitude, a measure of the amount of energy released during an event.

Landslides and Rockfalls: These events are large movements of land downhill. They can be induced by seismic events (earthquakes) or wet, saturated soil conditions and can cause significant damage to life and property. Landslides are defined as the movement of rock, debris, or earth masses down a slope. Landslides are a form of “mass wasting,” which refers to any downslope movement of soil and rock under the direct influence of gravity. Landslide events include rock falls, topples, slides, spreads, and debris flows. Causes of landslides include rainfall, earthquakes, volcanic activity, groundwater changes, and alteration of a slope by manmade construction activities.

Liquefaction: This occurs when saturated, loose materials (e.g., sand, silty sand) are weakened and transformed from a solid to a near-liquid state due to increased pore water pressure. The increase in pressure is caused by strong ground motion from an earthquake.

Paleontological Resources: The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources contribute to the understanding of past environments, environmental change, and the evolution of life.

Quaternary Age: The most recent of the three periods of the Cenozoic Era in the geologic time scale of the International Commission on Stratigraphy (ICS). It follows the Tertiary Period, spanning 2.588 ± 0.005 million years ago to the present. The Quaternary includes two geologic epochs: the Pleistocene and the Holocene Epochs.

Seismic Hazards: Seismicity is the geographic and historical distribution of earthquakes, including their frequency, intensity, and distribution. Seismic hazards include surface rupture, ground shaking, liquefaction, landslides, subsidence, expansive soils, and soils and soil erosion.

Subsidence: Land subsidence is the gradual, local setting or shrinking of the earth's surface with little or no horizontal motion. Subsidence is normally the result of gas, oil, or water extraction, hydro compaction, or peat oxidation and not the result of landslide or ground failure.

Surface Rupture: This occurs when movement on a fault deep within the earth breaks through to the surface. Fault ruptures almost always follow pre-existing faults that are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking. Fault creep is the slow rupture of the earth's crust.

Unique Paleontological Resource: This term is defined as a fossil that meets one or more of the following criteria: (1) it provides information on the evolutionary relationships and developmental trends among organisms, living or extinct; or (2) it provides data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geology.

4.7.2 Environmental Setting

Regional Geological Setting

Kern County consists of three general areas or regions: Valley Region, Mountain Region, and Desert Region. The County encompasses more than five million acres within these diverse geographical regions. The proposed project is located in the Valley Region in the western portion of unincorporated Kern County, California. The County's geography includes mountainous areas, agricultural lands and deserts. The project site is located in the very southern portion of what is known as the Great Valley geomorphic province. The geologic features of this province are characterized by thick alluvial deposits in a wide and long structural trough bounded by the Sierra Nevada and Coast Range mountain ranges. The southern part of the province is defined by the San Joaquin Valley which is drained by the San Joaquin River (California Geological Survey [CGS] 2002). The Tehachapi Mountains mark the southern boundary of the province which is not far from the intersection of the San Andreas and Garlock faults. The Garlock Fault is a major strike-slip fault that is oriented in a roughly east-west direction. The San Andreas Fault is the master fault of an intricate fault network cutting through the California coastal region; the fault extends from

northern California to the San Bernardino area of southern California. The project site is not intersected by any known faults but is located in a region considered seismically active (USGS, 2020).

Geomorphic Provinces - Valley Region

Great Valley Province

The Great Valley Geomorphic Province of California is an alluvial plain, about 50 miles wide and 400 miles long between the Coast Ranges and Sierra Nevada. The Great Valley is drained by the Sacramento and San Joaquin rivers, which join and enter San Francisco Bay. The southern part of the Great Valley is the San Joaquin Valley. The San Joaquin Valley is a sediment-filled basin over 65 million years of age. Sediments within the valley were deposited in a forearc basin that formed near the base of the Sierra Nevada Mountains and the accretionary coast range during a period of subduction. During the Quaternary period, sea levels receded, and the inland sea became a valley that was partially formed by tectonic forces of the San Andreas Fault. Subsequently, terrestrial sediments filled the valley from the adjacent highlands. Erosion and deposition of such sediments continue to occur as a present-day condition. The Valley sediments vary in depth from tens of feet along the margins of the basin to thousands of feet near the Central Valley. The Quaternary alluvial sediments vary from coarse-grained conglomerates to fine-grained playa deposits from the surrounding hills and mountains.

Streams flowing westerly from the Sierra Nevada Mountains have eroded and deposited materials into the trough, forming alluvial fans at the surface. The largest of these within the County is the Kern River fan, covering approximately 300 square miles of the valley and made up of sand, silt and clay deposits. The Kern River flood plain is incised into the upper part of the fan, north of downtown Bakersfield, and spreads out across the broad, flat lower fan to the southwest. Continental sediment deposits in the San Joaquin Valley range from Pliocene to Holocene in age. Alluvial deposits along the west side of the valley, which are derived from the Coast Ranges, are assigned to the Tulare Formation. Continental deposits along the east side of the valley in Kern County were derived from the Sierra Nevada and are assigned to the Kern River Formation.

Local Geologic Setting

Kern County is a geologically complex and diverse area and is impacted by compressional forces created as the North American and Pacific tectonic plates slide past one another along the San Andreas fault. Plate tectonic forces and other geomorphic activity associated with the gradual westward rotation and elevation of the batholithic core of the Sierra Nevada create fractures or faults in the earth's crust to accommodate compressional strain. Earthquakes are produced from sudden movements along these faults, generating ground motion when the accumulated stress within the rocks is released as waves of seismic energy.

Site Topography

The project site is located entirely within Section 24, Township 32 South, Range 25 East, in the Mount Diablo Base and Meridian (Sec 24, T32S, R25E, M. D. B. & M.). The project is located in a relatively flat section of the County, where elevation ranges from approximately 313 feet above mean sea level (amsl) to approximately 325 feet amsl and is located within the U.S. Geological

Survey (USGS) 7.5-minute series, Taft, California, topographic quadrangle. The site is nearly level, sloping downward, northwesterly at a grade of about 0.9%.

Faults and Seismic History

As noted above, a fault is a fracture in the crust of the earth along which land on one side has moved relative to land on the other side. Most faults are the result of repeated displacement over a long period of time. A fault is the line on the earth's surface that defines the subsurface fault.

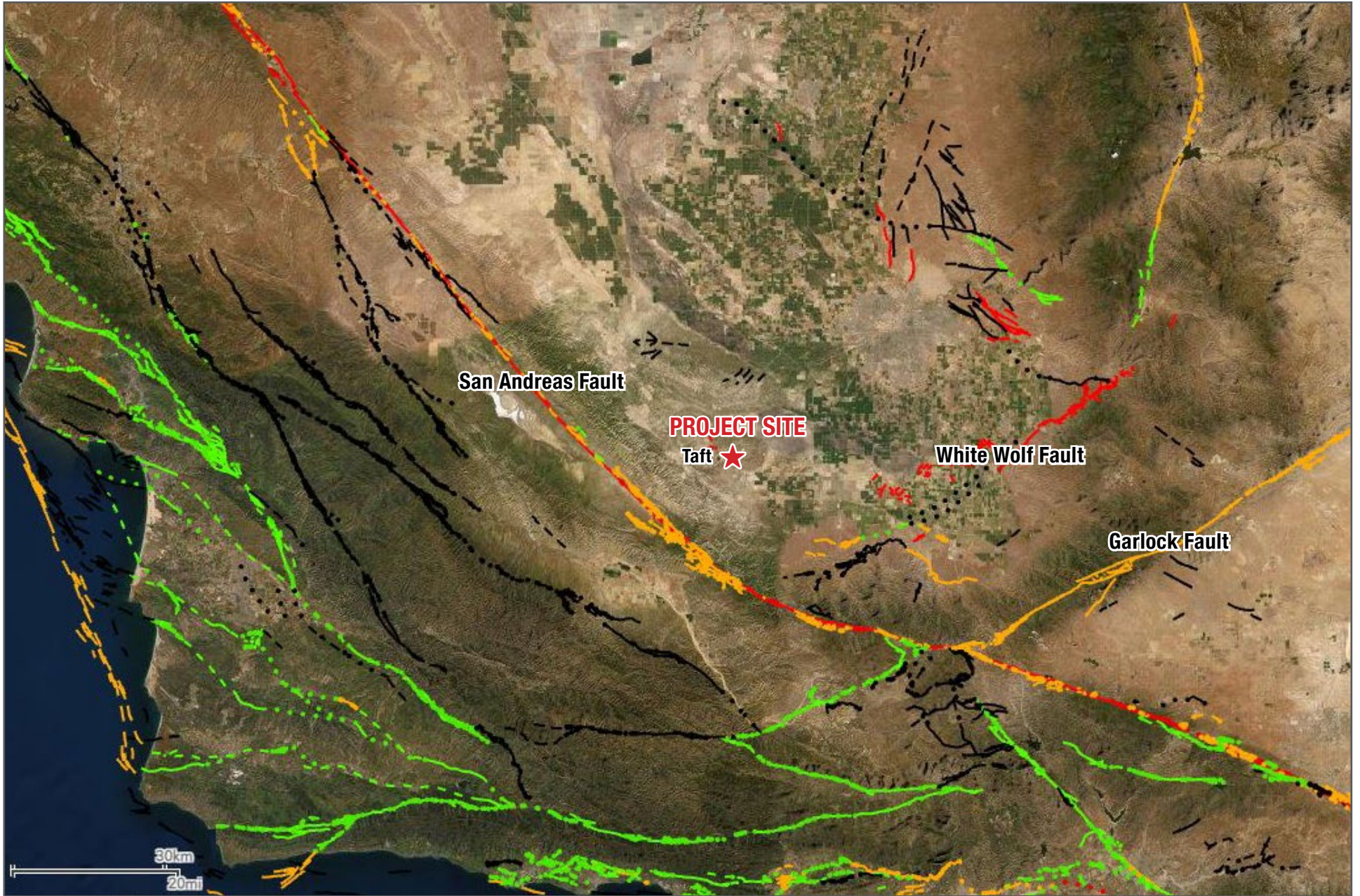
An active fault is defined by the State Mining and Geology Board as one that has had "surface displacement within Holocene times (approximately the last 11,000 years)." This definition does not mean that faults that lack evidence of surface displacement within Holocene times are necessarily inactive. A fault may be presumed to be inactive based on satisfactory geologic evidence; however, the evidence necessary to prove inactivity is sometimes difficult to obtain and locally may not exist. A potentially active fault is one that shows evidence of surface displacement during Quaternary time (the last 1.6 million years).

The Alquist-Priolo Earthquake Fault Zoning Act, passed in 1972, is primarily intended to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act addresses only the hazard of surface fault rupture but no other earthquake hazards. The law requires the State Geologist to establish regulatory zones, known as Earthquake Fault Zones, around the surface traces of active faults and to issue appropriate maps.

The project site is located in a seismically active area, as is most of California, and therefore, could be subjected to future seismic shaking during earthquakes generated by any one of several surrounding active faults. There are numerous geologic fractures in the earth's crust within Kern County, as shown in **Figure 4.7-1, Kern County Faults**, with the San Andreas Fault being the most prominent. The San Andreas and Garlock faults intersect near Frazier Park; at this intersection, a westward bend in San Andreas Fault has created a zone of north-south compression resulting in the uplift of the Transverse Ranges. Descriptions of the major faults within the County are provided below.

San Andreas Fault

The San Andreas fault is a classic "strike-slip" transform fault that is caused by the movement of the North American and the Pacific tectonic plates along a 650-mile point of contact extending from the Mendocino Escarpment on the north to the Imperial Valley on the south. The eastern Pacific Plate is generally trending north along the fault at a rate of two inches per year. The San Andreas Fault trends nearly north, primarily along the western foot of the Temblor Range. The San Andreas Fault trace bends to the east in the Tehachapi Mountains and continues in a more easterly direction along the San Gabriel and San Bernardino mountains. The northerly movement of the Pacific Plate creates significant compressional forces at the bend, including in the vicinity of Frazier Park in the Mountain Region.



SOURCE: USGS



Kern County Faults

Figure 4.7-1

The segment of the San Andreas Fault within Kern County is relatively short compared with its total length; however, it is an important segment because it breaks from the system's predominantly 350-degree trending direction between San Luis Obispo County and Los Angeles County. Geologists consider this fault as having the potential to generate an earthquake of magnitude 8.3 on the Richter scale, which is designated as the maximum credible earthquake. This is an active fault and capable of causing damage in the County. Areas along this fault have been designated by the State as Alquist-Priolo Special Studies Zones.

Several historic earthquakes occurring along the San Andreas Fault have produced significant seismic shaking. The most notable example was the January 9, 1857, Fort Tejon earthquake, one of the largest earthquakes ever recorded in the United States. The Fort Tejon earthquake produced a surface rupture more than 200 miles long along the San Andreas Fault, from Cholame to the north to the Cajon Pass area to the south. The earthquake was estimated to be magnitude 7.9 on the Richter scale and strong shaking caused by the earthquake was reported to have lasted at least one minute. The San Andreas fault is located approximately 15 miles west of the project site.

White Wolf Fault

The White Wolf fault is a 45-mile-long southeast dipping, left-lateral, oblique, reverse fault that traverses the southeastern end of the San Joaquin Valley, near the intersection of Interstate 5 (I-5) and State Route (SR) 99 near Wheeler Ridge to northeast of Caliente. This fault is generally located eight miles south of downtown Bakersfield. On July 21, 1952, the White Wolf fault ruptured, producing an earthquake of magnitude 7.5 and an extensive sequence of aftershocks. This generated a surface rupture along approximately 17 miles of the surface trace of this fault, although it is thought surface rupture occurred along most of its length. The magnitude 7.5 earthquake in 1952 is the only recorded rupture along the White Wolf fault in historic time. Significant features caused by the fault are the valley at the junction of SR-58 and SR-223 (sometimes called White Wolf Valley) and the Arvin cutoff along SR-223. This fault has been designated by the State as an Alquist-Priolo Special Studies Zone. The White Wolf fault is located approximately 14 miles southeast of the project site.

Garlock Fault

The Garlock fault is an active high-angle shear zone with predominant strike-slip movement that extends from its point of intersection with the San Andreas Fault near Lebec eastward toward Death Valley. It is one of the most obvious geologic features in Southern California, clearly marking the northern boundary of the area known as the Mojave Desert Province, or Mojave Block, as well as the southern end of the Sierra Nevada and the valleys of the westernmost Basin and Range Province. The most recent recorded earthquake was a magnitude 5.7 event near Mojave on July 11, 1992, believed to have been triggered by the Landers earthquake just two weeks earlier. Areas along this fault have been designated by the State as Alquist-Priolo Special Studies Zones. The Garlock Fault is located approximately 27 miles south east of the project site.

Breckenridge-Kern Canyon Fault

The Breckenridge-Kern Canyon fault is located in the southern Sierra Nevada Mountains. It trends northward from the north end of Walker Basin to the north of Mount Whitney, a distance of approximately 100 miles. Uncertainty exists as to the degree of activity of this fault system and its classification. It is designated by the State as an active system with a potential maximum credible

earthquake of magnitude 8.0. Areas along this fault have been designated by the State as Alquist-Priolo Special Studies Zones. The Breckenridge-Kern Canyon Fault is located approximately 37 miles east of the project site.

Pond Poso Creek Fault

The Pond Poso Creek Fault is located nine miles north of Oildale. It trends in a northwesterly direction and is a normal fault that dips to the south. The Pond Poso Fault consists of four parallel breaks, forming a zone approximately two-thirds of a mile wide. This fault is designated as active with a maximum credible earthquake of magnitude 7.0. Areas along the Pond Poso Fault have been designated by the State as Alquist-Priolo Special Studies Zones. The Pond-Poso Creek Fault is located approximately 28 miles east of the project site.

Soils

Soil surveys of the County conducted by the United States Department of Agriculture Natural Resource Conservation Service (USDA NRCS) have divided the county into four regions (Northwest, Southwest, Northeast, and Southeast). The Soil Survey Geographic database contains information about soil as collected by the National Cooperative Soil Survey over the course of a century. This information is gathered by visual observations of the soil and taking soil samples to be analyzed in laboratories. Soil maps outline areas, referred to as Map Units, which describe soils and other components that have unique properties, interpretations, and productivity. The County contains soils that range from well drained alluvium to poorly drained clay and include soils that could be expansive.

The SKIC EIR (2001) discussed two soil types, Cerini loam and Westhaven loam that occur within the SKIC project area. The majority of the composting facility is located within an area mapped as Cerini loam but the eastern and southern portions as well as the southerly portion of the 100-acre site is located on Westhaven loam: See **Figure 4.7-2, SKIC Soil Map**. These soil types are discussed below.

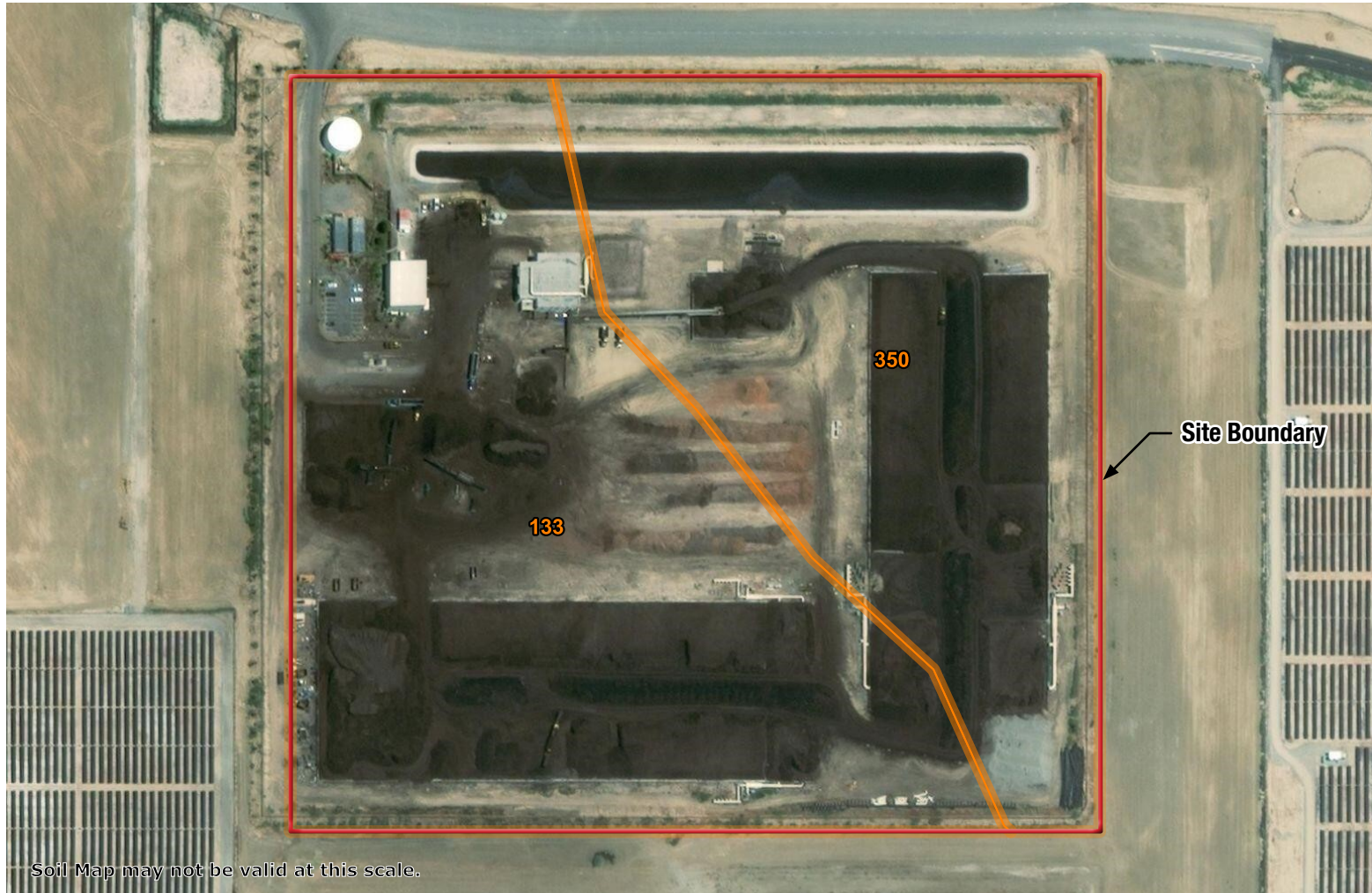
Cerini loam

This unit is very deep, on level ground and is well drained with slow permeability. Parent material of this soil is alluvium weathered from mixed rock and is composed of approximately 80 percent Cerini loam and similar inclusions and 20 percent contrasting inclusions.

Westhaven loam

This unit is very deep, on level ground and is moderately well drained with slow permeability. Parent material of this soil is alluvium weathered from mixed rock sources and is composed of approximately 80 percent Westhaven silt loam and similar inclusions and 20 percent contrasting inclusion.

Expansive soils are typically associated with high volumes of clay, are generally fine-grained, cohesive, and that expand when moisture is added. These soils tend to lose their ability to support foundations of structures because of their expansive nature when saturated. The weight of the overlying structures squeezes the water-saturated clays laterally from under the foundations. As a result, the structures can lose support, become weakened, or damaged and in more severe cases, collapse or become uninhabitable. Some soils have the potential to contain naturally occurring asbestos. Naturally occurring asbestos occurs in ultramafic rocks such as dunites, periodotites, pyroxenites, hornblendites and serpentinites.



Map Scale: 1:3,520 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters

0 150 300 600 900 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
133	Cafflax loam, 0 to 1 percent slopes	26.0	56.7%
350	Posochanet silt loam, saline-sodic, 0 to 1 percent slopes	19.9	43.3%
Totals for Area of Interest		45.9	100.0%

SOURCE: NRCS, 2018



Soils within the project site were tested as part of a 2001 geotechnical engineering investigation. As part of the investigation subsurface soil conditions were explored by drilling 17 borings to depth of approximately 10 to 50 feet below the ground surface (bgs). Laboratory testing was conducted on select soil samples. In general, the upper soils consisted of 6 to 12 inches of very loose silty sand, sandy silt clayey silt or sand. These soils in the upper range are disturbed, have low strength characteristics, and are highly compressible when saturated. Below the loose surface soils, approximately 3.5 to 8 feet of loose to medium dense silty sands, clayey silts, sandy silts, or sands were encountered. These soils were found to be moderately strong and slightly compressible with the clayey soils having a moderate expansion potential. Below 4 to 9 feet, the subsurface soils consisted of alternating layers of silty sand, sandy silt, clayey silt, and silty clay were encountered. Field and laboratory tests suggest that these soils have moderate strength characteristics and are slightly to moderately compressible.

These soils continued to the depth of the borings (Krazan Associates, 2001). It is important to understand that the compost facility, which is permitted under the existing CUP No. 2 Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421), has been partially constructed, specifically, 46 acres of the 100-acre compost facility is built and operational.

Geologic Hazards

Seismic Hazards

Seismicity is the geographic and historical distribution of earthquakes, including their frequency, intensity, and distribution. Seismic hazards include surface rupture, ground shaking, liquefaction, landslides, subsidence, expansive soils, and soil erosion. The Kern County General Plan provides fault locations and policies and implementation measures for seismic hazards. Due to proximity to major fault systems, the project area and its vicinity is considered susceptible to seismic hazards.

Strong Ground Shaking

Seismicity is the geographic and historical distribution of earthquakes, including their frequency, intensity, and distribution. Geologic hazards include surface rupture, ground shaking, liquefaction, landslides, subsidence, expansive soils, and soil erosion. Earthquakes are classified by their magnitude, a measure of the amount of energy released during an event. During a seismic event, the project site may be subjected to high levels of ground shaking due to proximity to active faults in the area.

As described above, the western and the southern end of the San Joaquin Valley is bordered by major active fault systems, making Kern County a historically active seismic area. The Kern County General Plan provides fault locations as well as policies and implementation measures related to geologic hazards. Because of the numerous geologic fractures in the earth's crust within the San Joaquin Valley area, all development on the valley floor in Kern County is subject to geologic hazards.

Induced Seismicity

The majority of earthquakes that occur each year throughout the world are the result of natural causes. Naturally occurring earthquakes generally are the result of the buildup of stresses caused by the lateral or vertical movement of blocks or plates moving and the subsequent buildup and release of energy. However, some earthquakes are the result of human activity and are called induced-seismic events or induced earthquakes. Human activities that can result in induced seismic events include injection and

withdrawal of fluids, impoundment of reservoirs, mining and controlled explosions (including underground). Hydraulic fracturing is also capable of producing induced seismic events. Hydraulic fracturing involves the injection of fluid and propellant into a targeted formation in an effort to fracture the rock and allow for fluid flow (i.e., oil or natural gas). Generally, hydraulic fracturing generates seismic events with a less than 2.0 magnitude. However, when faults are present, larger seismic events are possible.

Fault Rupture

Ground surface rupture along an earthquake fault may cause damage to aboveground infrastructure and other features and occurs when movement on a fault deep within the earth breaks through to the surface. Fault ruptures almost always follow pre-existing faults that are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking. Fault creep is the slow, continuous aseismic fault split of the earth's crust. Fault rupture is considered to be most likely to occur along the identified traces of active faults. The project area is not located within a currently mapped California Earthquake Special Studies Fault Zone. As described above, the nearest fault is the White Wolf Fault, located approximately 14 miles southeast of the project site. As a result, based on available geologic data, there is a very low potential for surface fault rupture to occur on the site during the design life of the project.

Liquefaction

Liquefaction is the phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of earthquake-induced strong ground shaking. Liquefaction occurs when saturated, loose materials (e.g., sand or silty sand) are weakened and transformed from a solid to a near-liquid state due to increased pore water pressure. The increase in pressure is caused by strong ground motion from an earthquake. Liquefaction-related phenomena can include lateral spreading, ground oscillation, flow failure, loss of bearing strength, subsidence, and buoyancy effects.

Seismic ground shaking of relatively loose, granular soils that are saturated or submerged can cause the soils to liquefy and temporarily behave as a dense fluid. Liquefaction is caused by a sudden temporary increase in pore water pressure due to seismic densification or other displacement of submerged granular soils. Liquefaction most often occurs in areas underlain by young alluvium where the groundwater table is higher than 50 feet below the ground surface. For liquefaction to occur, the soil must be saturated (i.e., shallow groundwater) and be relatively loose. In order to determine the liquefaction susceptibility of a region, three major factors must be analyzed. These include: (1) the density and textural characteristics of the alluvial sediments; (2) the intensity and duration of ground shaking; and, (3) the depth to groundwater.

Based on data from the project site and test holes drilled within the composting facility, groundwater was reportedly 6 to 12 feet below the ground surface (bgs) (SKIC, 2001). Refer to **Section 4.10, Hydrology and Water Quality**, of this EIR for additional information on groundwater and groundwater levels. Groundwater levels can vary depending on seasonality and other factors including amount of local groundwater extraction and annual precipitation. Depth to groundwater also varies throughout the SKIC where was previously reported to be approximately 20 feet bgs at the north end of the property to approximately 100 feet at the south end of the property (SKIC, 2001).

Expansive Soils

Expansive soils are characterized by their potential “shrink-swell” behavior. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in certain fine-grained clay sediments from the process of wetting and drying. Clay minerals such as smectite, bentonite, montmorillonite, beidellite, vermiculite and others are known to expand with changes in moisture content. The higher the percentage of expansive minerals present in near surface soils, the higher the potential for significant expansion. The greatest effects occur when there are significant or repeated moisture content changes. Expansions of ten percent or more in volume are not uncommon. This change in volume can exert enough force on a building or other structure to cause cracked foundations, floors and basement walls. Structural damage typically occurs over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils.

The presence of expansive soils is generally site specific and determined through a preliminary geotechnical investigation from laboratory analysis of subsurface soils. Regardless, the hazard can generally be minimized through implementation of applicable building codes and structural improvement requirements such as treatment of soils or replacement with engineered fills.

Lateral Spreading

Lateral spreading is a potential hazard commonly associated with liquefaction where extensional ground cracking and settlement occur as a response to lateral migration of subsurface liquefiable material. These phenomena typically occur adjacent to free faces such as slopes and creek channels. The potential for lateral spreading to occur at the site is low. The project site lies in a relatively flat-lying plain where landslides, lateral spreading, subsidence, liquefaction, and collapse are not expected to occur.

Landslides

Landslides commonly occur in connection with other major natural disasters such as earthquakes, volcanic eruptions, wildfires, and floods; landslides also are caused by other factors such as strength of underlying material surface and groundwater conditions, surface vegetation, and seasonal rainfall. Landslides are associated with areas of steep slopes generally greater than 30 percent. Slopes greater than 30 percent are present along the eastern and southern boundaries of the Eastern Subarea and along the western boundary of the Western Subarea. Slope stability depends upon slope steepness and the strength of the underlying material. Developments on slopes over 30 percent are regulated according to Kern County Zoning Ordinance, *Chapter 19.88, Hillside Development*. The project site is not within an area of high risk for landslides as it is relatively flat and is not subject to movement of rock, debris, or soil.

Land Subsidence

Land subsidence is the gradual, local settling or shrinking of the earth’s surface with little or no horizontal motion. Subsidence is normally the result of gas, oil, or water extraction; hydro-compaction; and/or peat oxidation and not the result of landslide or ground failure. Land subsidence is occurring throughout the County; however, the majority of the subsidence is within the San Joaquin Valley.

Groundwater withdrawal has been primarily used for agricultural purposes. Beginning in the 1920s, farmers relied on groundwater supply. Over time, the over pumping caused groundwater levels to decline and aquifer stems to compact, which resulted in land subsidence that became permanent loss of aquifer-stem storage capacity. By 1970, land subsidence had occurred in an approximately 5,200-square -mile area of the San Joaquin Valley, approximately half of the Valley. Within this area, some locations experienced as much as 28 feet in land subsidence. More recently, reduced surface-water availability during the 1976 and 1977, 1986 to 1992, 2007 to 2009, and 2012 to 2015 caused by drought conditions resulted in increased groundwater pumping in the San Joaquin Valley, declines in water-levels to near historic lows, and renewed aquifer compaction (USGS, 2017). Land subsidence from 2008 to 2010 along the California Aqueduct, within Kern County, ranges from approximately 25 millimeters (mm, less than 1 foot) to as much as approximately 280 mm (11 feet) (USGS, 2017)

Soil Erosion

Soil erosion occurs when surface materials are worn away from the earth's surface due to land disturbance and/or natural factors such as wind and precipitation. The potential for soil erosion is determined by characteristics including texture and content, surface roughness, vegetation cover, and slope grade and length. Wind erosion typically occurs when fine-grained non-cohesive soils are exposed to high velocity winds, while water erosion tends to occur when loose soils on moderate to steep slopes are exposed to high-intensity storm events. Erosion induced by seismic activity occurs on gentle to steep slopes covered by unconsolidated sediments. This geologic hazard is aggravated by landslides, fissures, tilting and offset along a fracture zone. It could become a significant hazard in many areas of the County.

Erosion is an ongoing process that continues within the County, primarily within existing drainage channels and washes where periodic flooding and sedimentation (transport) occur during and following periods of intense rainfall. Continued erosion is anticipated where development structures are located within or adjacent to areas subject to flooding and/or surface water flow.

Settlement of Soils

The settlement of soils is characterized by sinking or descending soils that occurs as the result of a heavy load being placed on underlying sediments and may be triggered by seismic events. Seismically induced settlement is dependent on the relative density of the subsurface soils. Without any available geotechnical testing to indicate the existing engineering properties of site soils, it is not possible to determine the current susceptibility to settlement. However, industry standard site preparation methods that could include foundation design measures such as compaction of surface soils or use of engineered fill that would be included as part of a final geotechnical design report to minimize the potential for settlement.

Paleontological Setting

Paleontological resources are the mineralized (fossilized) remains of prehistoric plants and animals and the mineralized impressions (trace fossils) left as indirect evidence of the form and activity of such organisms. These resources are located within sedimentary rocks or alluvium and are considered to be nonrenewable.

Formations that contain vertebrate fossils are considered more sensitive because vertebrate fossils tend to be rare and fragmentary. Formations containing microfossils, plant casts, and invertebrate

fossils are more common. A significant fossil deposit is a rock unit or formation that contains significant nonrenewable paleontological resources. This is defined as comprising one or more identifiable vertebrate fossils, large or small, and any associated invertebrate and plant fossils, traces, and other data that provide taphonomic, taxonomic, phylogenetic, ecologic, and stratigraphic information (ichnites and trace fossils generated by vertebrate animals such as trackways or nests and middens), which provide datable material and climatic information. This definition excludes invertebrate or botanical fossils except when present within a given vertebrate assemblage. However, invertebrate and botanical fossils may be significant as environmental indicators associated with vertebrate fossils.

The local geology of the project site determines its paleontological potential. The project site is underlain by surficial deposits of younger Quaternary Alluvium (Qya), derived primarily as fan deposits from the Tehachapi Mountains. The younger Quaternary Alluvium is typically not paleontologically sensitive; however, the younger Quaternary Alluvium may be underlain by older Quaternary deposits at unknown depths, which may contain significant vertebrate fossils.

4.7.3 Regulatory Setting

Geologic resources and geotechnical hazards are governed primarily by local jurisdictions. The conservation elements and seismic safety elements of city and county general plans contain policies for the protection of geologic features and avoidance of hazards.

The California Environmental Quality Act (CEQA) is the major environmental statute that guides the design and construction of projects on non-federal lands in California. This statute sets forth a specific process of environmental impact analysis and public review. In addition, the project proponent must comply with other applicable Federal, State, and local applicable statutes, regulations and policies. Relevant and potentially relevant statutes, regulations, and policies are discussed below.

Federal

Clean Water Act (CWA)

The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq.), formally 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. 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 National Pollutant Discharge Elimination System (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), State Water Resources Control Board Order No. 2009-0009-DWQ. The General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which includes Best Management Practices (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 Earthquake Hazards Reduction Act was enacted in 1997 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by NEHRP, which refined the description of agency responsibilities, program goals, and objectives.

NEHRP’s mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards such as those to which the project would be required to adhere.

Federal Paleontological Resources

A variety of federal statutes specifically address paleontological resources. They are generally applicable to a project if that project includes federally owned or federally managed lands or involves a federal agency license, permit, approval, or funding. The first of these is the Antiquities Act of 1906 (54 U.S.C. 320301-320303 and 18 U.S.C. 1866(b)), which calls for protection of historic landmarks, historic and prehistoric structures, as well as other objects of historic or scientific interest on federally administered lands, the latter of which would include fossils. The Antiquities Act both establishes a permit system for the disturbance of any object of antiquity on federal land and also sets criminal sanctions for violation of these requirements. The Antiquities Act was extended to specifically apply to paleontological resources by the Federal-Aid Highways Act of 1958. More recent federal statutes that address the preservation of paleontological resources include the National Environmental Policy Act, which requires the consideration of important natural aspects of national heritage when assessing the environmental impacts of a project (P.L. 91-190, 31 Stat. 852, 42 U.S.C. 4321–4327). The Federal Land Policy Management Act of 1976 (P.L. 94-579; 90 Stat. 2743, U.S.C. 1701–1782) requires that public lands be managed in a manner that will protect the quality of their scientific values, while Title 40 Code of Federal Regulations Section 1508.2 identifies paleontological resources as a subset of scientific resources. The Paleontological Resources Preservation Act (Title VI, Subtitle D, of the Omnibus Land Management Act of 2009) is the primary piece of federal legislation.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act offers provisions of paleontological resources identified on federal, Native American, or state lands and guidance for their management and protection and promotes public awareness and scientific education regarding vertebrate fossils. The law also requires federal agencies to develop plans for inventory, collection, and monitoring of paleontological resources and establishes stronger criminal and civil penalties for the removal of scientifically significant fossils on federal lands.

State

The Alquist-Priolo Earthquake Fault Zoning Act of 1972

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) was passed in 1972 to regulate development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. Under the Alquist-Priolo Act, the California State Geologist identifies areas that are at risk of surface fault rupture. The primary purpose of the Alquist-Priolo Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. An active fault is defined by the State Mining and Geology Board (SMGB) as one which has “had surface displacement within Holocene time (about the last 11,000 years).” The California Geological Survey (CGS), previously known as the California Division of Mines and Geology (CDMG), has compiled Special Publication 42 – Fault Rupture Hazard Zones (California Geological Survey [CGS], 2018), which delineates and defines active fault traces and zones that require specific studies to address rupture hazards with respect to “structure[s] for human occupancy.” Any project that involves the construction of buildings or structures for human occupancy is subject to the Alquist-Priolo Act and any structures for human occupancy must be located at least 50 feet from any active fault.

Seismic Hazards Mapping Act (the Act) of 1990

In accordance with Public Resources Code, Chapter 7.8, Division 2, the CGS 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. In accordance with the Seismic Hazards Mapping Act, site-specific geotechnical investigations must be performed prior to permitting most urban development projects within seismic hazard zones.

California Building Code (CBC 2019)

The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress facilities, and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The 2019 edition of the CBC is based on the 2018 International Building Code (IBC) published by the International Code Council. While the code is updated triennially, the 2019 edition of the CBC was published by the California Building Standards Commission in 2019 and took effect starting January 1, 2020. The 2019 CBC contains California amendments based on the American Society

of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-16, *Minimum Design Loads for Buildings and Other Structures*, provides requirements for general structural design and includes means for determining earthquake loads (which is defined as the overall force to which a structure is subjected in supporting a weight or mass, or in resisting externally applied forces. Excess load or overloading may cause structural failure) as well as other loads (such as wind loads) for inclusion into building codes. Seismic design provisions of the building code generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of the structure, which the structure then must be designed to withstand. The prescribed lateral forces are generally smaller than the actual peak forces that would be associated with a major earthquake. Consequently, structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake. However, it is reasonable to expect that a structure designed in accordance with the seismic requirements of the CBC should not collapse in a major earthquake.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine a seismic design category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site; SDC ranges from A (very small seismic vulnerability) to E/F (very high seismic vulnerability and near a major fault). Seismic design specifications are determined according to the SDC in accordance with CBC Chapter 16. CBC Chapter 18 covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), load-bearing of soils (1806), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). For Seismic Design Categories D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

Chapter 18 also describes analysis of expansive soils and the determination of the depth to groundwater table. Expansive soils are defined in the CBC as follows:

1803.5.3 Expansive Soil. *In areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist. Soils meeting all four of the following provisions shall be considered*

expansive, except that tests to show compliance with Items 1, 2 and 3 shall not be required if the test prescribed in Item 4 is conducted:

- 1. Plasticity index (PI) of 15 or greater, determined in accordance with ASTM D 4318.*
- 2. More than 10 percent of the soil particles pass a No. 200 sieve (75 micrometers), determined in accordance with ASTM D 422.*
- 3. More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM D 422.*
- 4. Expansion index greater than 20, determined in accordance with ASTM D 4829.*

State Paleontological Resources

Paleontological resources are also afforded protection by CEQA. Appendix G (Part V) of the CEQA Guidelines provides guidance relative to significant impacts on paleontological resources, stating that a project will normally result in a significant impact on the environment if a project would “Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” PRC Section 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, the California Penal Code Section 622.5 sets the penalties for the damage or removal of paleontological resources.

Professional Standards

The Society for Vertebrate Paleontology (SVP) has established standard guidelines for acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. Most practicing professional paleontologists in the nation adhere closely to the SVP’s assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most California State regulatory agencies accept the SVP standard guidelines as a measure of professional practice.

Water Quality Control Board

Each of the nine Regional Water Quality Control Boards (RWQCBs) adopts a Water Quality Control Plan which recognizes and reflects regional differences in existing water quality, the beneficial uses of the region’s groundwater and surface waters, and local water quality conditions and problems. Water quality problems in the regions are listed in these plans, along with the causes, if they are known. Each RWQCB is to set water quality objectives that will ensure the reasonable protection of beneficial uses and the prevention of nuisance, with the understanding that water quality can be changed somewhat without unreasonably affecting beneficial uses.

Local

Construction and operation of the proposed project would be subject to policies and regulations contained within the general and specific plans, including the Kern County General Plan, South Kern Industrial Center Specific Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies pertaining to the avoidance of geologic hazards and/or the protection of unique geologic features. The policies, goals, and implementation measures in the

Kern County General Plan and South Kern Industrial Center Specific Plan for geology and soils that are applicable to the project are provided below. The Kern County General Plan and the South Kern Industrial Center Specific Plan contain additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the Kern County General Plan and South Kern Industrial Center Specific Plan are incorporated by reference.

Kern County General Plan

The project site is located within the Kern County General Plan. Below are the applicable policies, goals, and implementation measures for geology and soils found in the Kern County General Plan. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development. Therefore, they are not listed below. However, as stated in **Chapter 2, Introduction**, of this EIR, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference

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

Section 1.3 Physical and Environmental Constraints

Goal

- **Goal 1.** To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas, which are not hazardous.

Policy

- **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.

Implementation Measures

- **Implementation Measure D.** Review and revise the County's current Grading Ordinance as needed to ensure that its standards minimize permitted topographic alteration and soil erosion while maintaining soil stability.
- **Implementation Measure N.** Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.

Section 1.10.3. Archaeological, Paleontological, Cultural, and Historical Preservation

Policy

- **Policy 25.** The County will promote the preservation of cultural and historic resources that provide ties with the past and constitute a heritage value to residents and visitors.

Implementation Measures

- **Measure M.** In areas of known paleontological resources, the County should address the preservation of these resources where feasible.

Chapter 4. Safety Element

Section 4.1 Introduction

Goal

- **Goal 1.** Minimize injuries and loss of life and reduce property damage.

Section 4.3 Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure

Policy

- **Policy 1.** The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.

Implementation Measures

- **Implementation Measure B.** Require geological and soils engineering investigations in identified significant geologic hazard areas in accordance with the Kern County Code of Building Regulations.
- **Implementation Measure C.** The fault zones designated in the Kern County Seismic Hazard Atlas should be considered significant geologic hazard areas. Proper precautions should be instituted to reduce seismic hazard, whenever possible in accordance with State and County regulations.

Section 4.5 Landslides, Subsidence, Seiche, and Liquefaction

Policies

- **Policy 1.** Determine the liquefaction potential at sites in areas of shallow groundwater (Map Code 2.3) prior to discretionary development and determine specific mitigation to be incorporated into the foundation design, as necessary, to prevent or reduce damage from liquefaction in an earthquake.
- **Policy 3.** Reduce potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.

South Kern Industrial Center Specific Plan

The South Kern Industrial Center Specific Plan (SKICSP) seismic safety element notes that the specific plan area is located on a relatively flat alluvial plain. The SKICSP notes that slight to severe levels of ground shaking can be expected due to the proximity to the previously listed faults. The SKICSP contains goals and policies pertaining to geotechnical issues. Those that are applicable are listed below:

Seismic Safety Element

Goals

- **Goal 1.** To encourage precautionary measures which significantly reduce loss of life, bodily injury and property damage resulting from potential hazardous occurrences.
- **Goal 4.** To minimize the hazards to public health, safety, and welfare that results from natural and man-made phenomena.

Policies

- **Policy 1.** Minimize the environmental, economic, and social impacts stemming from hazardous occurrences such as fire, flood, earthquake, and hazardous materials.

- **Policy 3.** Protect plan Area workers from the risk of injury and property damage that could potentially result from fire hazards, geologic hazards, exposure to potentially hazardous substances.
- **Policy 9.** Establish and enforce programs for reduction of hazardous and geologic risks.

Implementation Measures

- **Implementation Measure 1.** All projects will be subject to the Site Plan Review Process, and Guidelines established herewith in Appendix “A”, whereby safety measures can be included in project design and development to minimize potential impacts.
- **Implementation Measure 2.** In the event of a natural or man-made catastrophe, the adopted Kern County Emergency Plan shall be used to provide necessary procedures to safely evacuate workers within the specific plan area. This Emergency Plan shall be available to all employees.
- **Implementation Measure 3.** Approved building and development codes shall be strictly enforced by the appropriate jurisdiction to minimize the probability of geological risk, fire, related loss, and exposure to hazardous substances.
- **Implementation Measure 4.** All Industrial facilities shall comply with all Federal, State and local regulations.
- **Implementation Measure 19.** All work regarding excavation, grading, and earthwork construction, including fills and embankments, shall conform to Appendix Chapter 33 of the Uniform Building Code as modified by Kern County (This would apply to the most current applicable version of the International Building Code).
- **Implementation Measure 20.** Geologic conditions and preparation of the site for development shall comply with all measures listed in the geologic report and the EIR prepared for the Specific Plan.
- **Implementation Measure 24.** A Soils report shall be submitted to the Kern County Planning Department for review prior to the approval of all development projects. The report shall address site and user specific investigations for liquefaction potential to confirm the optimum design requirements.

Kern County Water Quality Control Plan

The Kern County Engineering and Survey Services Department requires the completion of an NPDES applicability form for projects with construction disturbing 1 acre or more within Kern County. This form requires the applicant to provide background information on construction activities and to identify whether stormwater runoff has the potential of discharging into waters of the United States, be contained on-site, or discharge indirectly off-site to a river, lake, stream, or off-site drainage facility. Should stormwater runoff be contained on-site and not discharge into any waters, no special actions are required. Should stormwater runoff discharge into waters of the United States, compliance with the State Water Resources Control Board (SWRCB) Construction General Permit is required, which requires preparation of an SWPPP. Should stormwater runoff not drain to waters of the United States (e.g., drains to a terminal drainage facility), the applicant would be required to develop an SWPPP and BMPs. Projects disturbing at least 1 acre of soil in Kern County are required to apply for a County NPDES Storm Water Program Permit. Prior to issuance of the permit, Kern County Engineering, Surveying and Permit Services must verify the

applicant's stormwater plans. Applicants must apply for the permit under one of the following four conditions:

- a) All stormwater is retained onsite and no storm water runoff, sediment, or pollutants from onsite construction activity can discharge directly or indirectly offsite or to a river, lake, stream, municipal storm drain, or offsite drainage facilities.
- b) All stormwater runoff is not retained on site, but does not discharge to a Water of the United States (i.e., drains to a terminal drainage facility). Therefore, an SWPPP has been developed and BMPs must be implemented.
- c) All stormwater runoff is not retained on site, and the discharge is to a Water of the United States. Therefore, a Notice of Intent (NOI) must be filed with the State Regional Water Resources Control Board prior to issuance of the building permit. Also, an SWPPP has been developed and BMPs must be implemented.
- d) Construction activity is between 1 and 5 acres and an Erosivity Waiver was granted by the SWRCB. BMPs must be implemented.

Kern County Building and Construction Ordinance (Title 17 of the Ordinance Code of Kern County)

Chapter 17.08 Kern County Building Code

All construction in Kern County is required to conform to the Kern County Building Code (Chapter 17.08, Building Code, of the Ordinance Code of Kern County). Kern County has adopted the CBC, 2016 Edition, with some modifications and amendments. The entire County is in Seismic Zone 4, a designation previously used in the UBC to denote the areas of highest risk to earthquake ground motion. California has established an Unreinforced Masonry program that details seismic safety requirements for Zone 4. Seismic provisions associated with Seismic Zone 4 have been adopted.

Chapter 17.28 of Kern County Grading Code

The purpose of the Kern County Grading Code is to safeguard life, limb, property, and the public welfare by regulating grading on private property. All requirements of the Kern County Grading Code would be applied during implementation of the project. All required grading permit(s) shall be obtained prior to commencement of construction activities. Sections of the Grading Code that are particularly relevant to geology and soils are provided below.

Section 17.28.140 Erosion Control

- A. **Slopes.** The faces of cut and fill slopes shall be prepared and maintained to control against erosion. This control may consist of effective planting. The protection for the slopes shall be installed as soon as practicable and prior to calling for final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.
- B. **Other Devices.** Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety.
- C. **Temporary Devices.** Temporary drainage and erosion control shall be provided as needed at the end of each work day during grading operations, such that existing drainage channels would not be blocked. Dust control shall be applied to all graded areas and materials and shall consist of

applying water or another approved dust palliative for the alleviation or prevention of dust nuisance. Deposition of rocks, earth materials or debris onto adjacent property, public roads or drainage channels shall not be allowed.

Section 17.28.170 Grading Inspection

- A. **General.** All grading operations for which a permit is required shall be subject to inspection by the building official. Professional inspection of grading operations and testing shall be provided by the civil engineer, soils engineer or the engineering geologist retained to provide such services in accordance with Subsection 17.28.170(E) for engineered grading and as required by the building official for regular grading.
- B. **Civil Engineer.** The civil engineer shall provide professional inspection within such engineer's area of technical specialty, which shall consist of observation and review as to the establishment of line, grade and surface drainage of the development area. If revised plans are required during the course of the work they shall be prepared by the civil engineer.
- C. **Soils Engineer.** The soils engineer shall provide professional inspection within such engineer's area of technical specialty, which shall include observation during grading and testing for required compaction. The soils engineer shall provide sufficient observation during the preparation of the natural ground and placement and compaction of the fill to verify that such work is being performed in accordance with the conditions of the approved plan and the appropriate requirements of this chapter. Revised recommendations relating to conditions differing from the approved soils engineering and engineering geology reports shall be submitted to the permittee, the building official and the civil engineer.
- D. **Engineering Geologist.** The engineering geologist shall provide professional inspection within such engineer's area of technical specialty, which shall include professional inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. Revised recommendations relating to conditions differing from the approved engineering geology report shall be submitted to the soils engineer.
- E. **Permittee.** The permittee shall be responsible for the work to be performed in accordance with the approved plans and specifications and in conformance with the provisions of this Code, and the permittee shall engage consultants, if required, to provide professional inspections on a timely basis. The permittee shall act as a coordinator between the consultants, the contractor and the building official. In the event of changed conditions, the permittee shall be responsible for informing the building official of such change and shall provide revised plans for approval.
- F. **Building Official.** The building official may inspect the project at the various stages of the work requiring approval to determine that adequate control is being exercised by the professional consultants.
- G. **Notification of Noncompliance.** If, in the course of fulfilling their responsibility under this chapter, the civil engineer, the soils engineer, or the engineering geologist finds that the work is not being done in conformance with this chapter or the approved grading plans, the discrepancies shall be reported immediately in writing to the permittee and to the building official. Recommendations for corrective measures, if necessary, shall also be submitted.
- H. **Transfer of Responsibility.** If the civil engineer, the soils engineer, or the engineering geologist of record is changed during the course of the work, the work shall be stopped until:

1. The civil engineer, soils engineer, or engineering geologist has notified the building official in writing that they will no longer be responsible for the work and that a qualified replacement has been found who will assume responsibility.
2. The replacement civil engineer, soils engineer, or engineering geologist notifies the building official in writing that they have agreed to accept responsibility for the work.

Kern County Multi-Hazard Mitigation Plan

The 2005 Kern County Multi-Hazard Mitigation Plan (MHMP) describes natural hazards and impacts (including those resulting from earthquakes, landslides, and soil hazards) that threaten communities, and establishes mitigation goals and strategies. Information contained in the MHMP could also be used to help guide and coordinate mitigation activities and local policy decisions for future land use decisions. The MHMP divides the County into three regions: Valley, Mountain, and Desert.

The governing federal law requires that the MHMP be reviewed and updated within five years in order to continue to be eligible for mitigation grant project funding. The County released a Comprehensive Update in September 2012 for its Kern Multi-Jurisdiction Hazard Mitigation Plan that is the current guiding document regarding multi-jurisdictional hazard planning. This plan is currently being updated by the County and 62 other participating jurisdictions to reduce losses from natural disasters. The intent of the mitigation plan is to use sustained, long-term actions to reduce the loss of life, personal injury, and property damage that can result from a disaster. Because the updated plan is not yet adopted, the previously discussed plan is applicable to the proposed project.

4.7.4 Impacts and Mitigation Measures

This section describes the methodology used in conducting the CEQA impact analysis for geology and soils; the thresholds of significance used in assessing impacts to geology and soils; and the assessment of impacts to geology and soils, including relevant mitigation measures.

Methodology

This section describes the potential geology and soils impacts associated with development of the proposed project. These baseline conditions were evaluated based on their potential to be affected by construction activities as well as implementation activities for the proposed project. The predicted interactions between the affected environment and the proposed project activities are evaluated based on the significance criteria identified below (*Thresholds of Significance*).

The loss of any identifiable fossil that could yield information important to prehistory, or that embodies the distinctive characteristics of a type of organism, environment, period of time, or geographic region, would be a significant environmental impact. Direct impacts to paleontological resources primarily concern the potential destruction of nonrenewable paleontological resources and the loss of information associated with these resources. This includes the unauthorized collection of fossil remains. If potentially fossiliferous bedrock or surficial sediments are disturbed, the disturbance could result in the destruction of paleontological resources and subsequent loss of information (significant impact). At the project-specific level, direct impacts can be mitigated to a less-than-significant level through the implementation of paleontological mitigation.

The CEQA threshold of significance for a significant impact to paleontological resources is reached when a project is determined to “directly or indirectly destroy a significant paleontological resource or unique geologic feature.” In general, for projects that are underlain by paleontologically sensitive geologic units, the greater the amount of ground disturbance, the higher the potential for significant impacts to paleontological resources. For projects that are directly underlain by geologic units with no paleontological sensitivity, there is no potential for impacts on paleontological resources unless sensitive geologic units which underlie the non-sensitive unit are also affected.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in CEQA Guidelines Appendix G, to determine if a project could potentially have a significant adverse effect on geology and soils.

A project would have a significant adverse effect on geology and soils if it would:

- 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;
 - ii. Strong seismic ground shaking;
 - iii. Seismic-related ground failure, including liquefaction; or
 - 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 risks to life or property;
- e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater; or
- f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The California Supreme Court has held that “agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project’s future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project’s impact on the environment—and not the environment’s impact on the project—that compels an evaluation of how future residents or users could be affected by exacerbated conditions.” (*California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, 377-378.) Thus, where the discussion below considers the effects of existing geological hazards on future uses of the project site, such analysis goes beyond the bounds of CEQA. The County has included such analysis, however, as it

intends to use its police power to ensure that the project is designed in a manner that is safe for such future users.

Project Impacts and Mitigation Measures

Impact 4.7-1: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo earthquake fault zoning map issued by the state geologist for the area or based on other substantial evidence of a known fault.

All project improvements would conform to all applicable ordinances of the Kern County Building Code (Chapter 17.08), as well as all applicable International Building Code (IBC) and CBC earthquake construction standards, including those relating to soil characteristics.

Kern County is located in Seismic Zone 4, which is a designation previously used in the UBC to denote the areas of the highest risk to earthquake ground motion. As a result, the proposed project would be subject to future seismic shaking and strong ground motion in the event of a major earthquake because of regional seismic activity.

As described in **Section 4.7.2, *Environmental Setting***, several active faults occur regionally but are not located in proximity to the project site. There are no known earthquake faults under or adjacent to the project site. The nearest fault is the White Wolf Fault, located approximately 14 miles southeast of the project site

Approval of the CUP Modification would result in the proposed project being authorized to accept new organic and mixed feedstocks at the compost facility, install new equipment for processing, increase all pile heights from 15 to 20 feet, and increase the days a pile is in place from 7 to 180. The Facility will install some new equipment to receive and process the new feedstocks. The new equipment and handling areas will be constructed within the existing permitted 100-acre Facility. The amended CUP would not result in a significant change to project operations such that it would exacerbate any danger from a fault rupture. All construction activities and equipment installed within the project area would be subject to applicable ordinances of the Kern County Building Code (Chapter 17.08), the 2019 CBC (CCR Title 24), the IBC, and the UBC. Conformance to all applicable requirements would reduce impacts related to seismic ground shaking and the proximity of earthquake faults. As a result, impacts would be less than significant, and no mitigation would be required.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Impact 4.7-2: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: strong seismic ground shaking.

Given the high seismicity of the central California region, moderate to severe ground shaking associated with earthquakes on the faults within the region can be expected. Similarly, ground-shaking from fault movement could be felt on the proposed project site and throughout Kern County. Strong ground motion within the proposed project area could occur from movement along the San Andreas Fault, the White Wolf Fault, and the Garlock Fault. These faults are considered to have the greatest potential to cause significant ground shaking at the site. In addition, activity on other faults, including the Pleito and Pond-Poso Creek Faults, and other faults in the region, could cause ground shaking at the project site. As a result, the project site could experience strong ground shaking resulting from moderate to strong earthquakes during the lifetime of the proposed project.

Ground motion from an earthquake that originates from one of the listed or other in the region could result in damage to the new equipment and existing supporting infrastructure. However, the project proponent is required to design all project elements, associated infrastructure, and improvements including installation of new equipment to withstand substantial ground shaking. All improvements would be required to conform with the applicable 2019 CBC, Kern County Building Code (Chapter 17), UBC, and IBC seismic design standards. Compliance with federal, State, and local laws, regulations, and policies would reduce anticipated impacts related to strong seismic ground shaking by requiring the proposed project facilities to be built to withstand seismic ground shaking. Conformance to all applicable design requirements would reduce impacts related to strong seismic ground shaking to less than significant.

It should be noted, the proposed project may include the construction of new structures including the installation of new equipment. Any buildings constructed are required to obtain a building permit from the County and will meet all seismic design standards. The proposed project would not exacerbate the risk of strong seismic ground shaking and would not place existing workers or future employees at increased risk from secondary seismic effects. As a result, impacts would be less than significant and mitigation is not required.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Impact 4.7-3: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: seismic-related ground failure including liquefaction.

Liquefaction occurs when saturated, loose materials (e.g., sand or silty sand) are weakened and transformed from a solid to a near-liquid state as a result of increased pore water pressure. The increase in pressure is caused by strong ground motion from an earthquake. A site's susceptibility to liquefaction is a function of depth, density, groundwater level, and magnitude of an earthquake. For liquefaction to occur, the soil must be saturated (i.e., shallow groundwater) and relatively loose. The surface effects of liquefaction can cause structural distress or failure due to ground settlement,

lurching, loss of bearing capacity in the foundation soils, and the buoyant rise of buried structures or utilities, and development of lateral spreads. Liquefaction typically occurs in areas underlain by young alluvium where the groundwater table is higher than 50 feet bgs.

As discussed above, previous ground water level in 2001 were reportedly 6 to 12 feet bgs. Within the SKIC groundwater depths ranged from approximately 20 feet bgs at the north end of the property to approximately 100 feet at the south end of the property. The Finale Supplemental EIR for the SKICSP found that some of the criteria for liquefaction to occur were present in the overall SKICSP area, but due to the cohesive nature and relative densities of soils sampled, the site is suitable for industrial development. In addition, all improvements and associated infrastructure installed as part of the existing compost facility were designed and installed to withstand substantial ground shaking in accordance with applicable CBC, Kern County Building Code (Chapter 17), UBC, and IBC seismic design standards. Compliance to federal, State, and local laws, regulations, and policies would reduce anticipated impacts involving seismic-related ground failure, including liquefaction. Therefore, personnel present during the installation of new equipment areas and operation phases of the compost facility are not expected to be exposed to a substantial increase in seismic-related ground failure hazards as a result of project implementation. Implementation of these building code requirements and local agency enforcement would reduce impacts to less-than-significant levels.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Impact 4.7-4: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

Strong shaking has the potential for activating landslides on hillsides; slope failures on creek banks; and tension cracking in areas underlain by loose, low-density soil, such as extensive fill. The proposed project site is located on flat ground with an approximate 0.9 percent grade and no substantive slopes. In addition, the project site is not located on, or adjacent to, steep slopes or hillsides, and improvements within the project area would not result in the creation of any slopes. The project area would be surrounded by a berm topped by a fence needed for security and to contain stormwater within the project site. No structures would be constructed on top of the berm and no structures or new equipment would be located adjacent to the berm. Therefore, the potential for impacts from landslides or other slope failures or for the project to exacerbate hazards from earthquake-induced ground shaking in these areas is considered remote. Impacts are less than significant, and mitigation is not required.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Impact 4.7-5: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: substantial soil erosion or the loss of topsoil.

Improvements made as part of the project would result in the expansion of the composting areas into the existing permitted area and installation of new equipment to be used as part of the pre-processing and post-composting operations. The proposed project also would increase variety of feedstock, increase pile height, and increase storage time. Improvements would potentially involve minor surficial earthwork and clearing to place the new equipment, but extensive grading or excavation in the new composting areas would not that could expose a substantial volume of soil to erosion. These areas undergo routine disking for weed management and are on relatively level ground. The existing composting facility also is on level and flat ground and is nearly devoid of vegetative cover. Thus, the proposed project improvements would not increase areas of exposed soils subjecting them to additional wind or water driven erosion.

The existing berm would be extended around the expanded composting area. The berm would contain stormwater flows within the site and conduct the water to existing runoff control measures. In addition, Mitigation Measures **MM 4.7-1** and **MM 4.7-2**, also would require the preparation of a Soil Erosion and Sedimentation Control Plan and would further reduce potential impacts to water quality. Implementation of these mitigation measures, in accordance with building code requirements would ensure that any potential impacts from erosion or the loss of topsoil would be reduced to less than significant.

If substantial grading is later determined to be required, pursuant to the Kern County Grading Ordinance (Section 17.28.070), the project would be required to submit grading plans accompanied by a soils engineering report, engineering geology report, and drainage calculations as may be required to obtain grading permits. Permit requests for grading are submitted to the Kern County Engineering and Survey Services Department for discretionary review and approval once all requirements have been satisfactorily met. All construction activities that would disturb greater than one-acre are subject to the requirements of the Kern County National Pollution Disposal Elimination System (NPDES) General Construction Permit Program. This requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for construction activities. The SWPPP would specify BMPs such as hay bales, silt fences, straw waddles, etc., to prevent soils from disturbed areas from moving offsite.

Given the relatively flat nature, installation of the berm and BMP's, as well as the existing erosion and stormwater control measures within the existing composting facility, it is unlikely that soil substantial erosion from water runoff would occur. Potential impacts would be further reduced with implementation of Mitigation Measures **MM 4.7-1** and **MM 4.7-2**, and impacts would be less than significant.

Mitigation Measures

MM 4.7-1: The project proponent shall limit grading to the minimum area necessary for construction. Prior to the initiation of a construction or grading project exceeding one (1)-acre in size, the project proponent shall retain a California registered and licensed professional engineer to submit final grading earthwork and foundation plans prior to construction to the Kern County Public Works for approval.

MM 4.7-2: The project proponent shall prepare a Soil Erosion and Sedimentation Control Plan to mitigate potential loss of soil and erosion due to project implementation. The Plan shall be prepared by a California registered and licensed civil engineer or other authorized professional and submitted for review and approval by the Kern County Public Works Department.

1. The Soil Erosion and Sedimentation Control Plan shall include, but is not limited to, the following:
 - a. Best Management Practices to minimize soil erosion consistent with Kern County grading requirements and the California Regional Water Quality Control Board requirements pertaining to the preparation and approval of a Stormwater Pollution Prevention Plan (Best Management Practices recommended by the Kern County Public Works Department shall be reviewed for applicability);
 - b. Provisions to maintain flow in washes, should it occur, throughout construction;
 - c. Provisions for site revegetation using native seed mix;
 - d. Sediment collection facilities as may be required by the Kern County Public Works Department;
 - e. A timetable for full implementation, estimated costs, and a surety bond or other security as approved by the County; and
 - f. Other measures required by the County during permitting, including long-term monitoring (post-construction) of erosion control measures until site stabilization is achieved.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.7-1** and **MM 4.7-2**, impacts would be less than significant.

Impact 4.7-6: The project would 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.

Liquefaction

The permitted area for the composting facility occupies a total of approximately 100 acres and is underlain by Cerini loam and Westhaven loam. The proposed project would include new structures. If new structures are built on weak compressible soils, it could lead to damage from loading if new soils are not properly prepared. Prior to ground disturbance related to the construction of new structures, the project proponent shall obtain all necessary grading and building permits from Kern County Public Works Building & Development Division. This would ensure that all improvements meet building standards and are designed to withstand secondary seismic effects. As noted above, the project site is on flat topography and would not be susceptible to landslides. Liquefaction and the associated potential for lateral spreading are also addressed in Impact 4.7-3, above.

Both subsidence and collapse can occur in saturated soils that are insufficiently compacted and is dependent on the relative density of the subsurface soils. Subsidence is likely to occur when fill and native materials are water saturated. A net decrease in pore pressure and contained water allows

the grains of soil to pack closer together. Collapsible soils are those that undergo settlement upon wetting, even without the application of additional load. Collapsible soils are typically associated with alluvial fans, windblown materials, or colluvium

Project improvements would be required to comply with Chapter 18 of the CBC, as applicable. This provision sets forth the requirements for geotechnical reports to include evaluation and geotechnical design measures to address any soils that are found incapable of supporting the proposed improvements. Placement of structures or other improvements such as equipment pads can represent new loadings on natural soils or artificial fills that could compress over time.

If areas with artificial or undocumented fill, are present the materials would be excavated, replaced, and recompact to building code standards found in Chapter 18 of the CBC, as needed. Areas where improvements may overlay varying fill thickness could be subject to differential settlement where underlying materials settle at different rates, causing damage to foundations. Site preparation methods of establishing similar fill thickness across building pat footprints would improve the performance of foundations.

The potential unstable soils to be present at the site depend on site specific conditions and the scope of proposed improvements would be required to install all new equipment and associated improvements to withstand substantial ground shaking in accordance with applicable California Building Code (CBC) seismic design standards, Kern County Building Code (Chapter 17), UBC, and International Building Code (IBC) standards. Therefore, compliance to federal, State, and local laws, regulations, and policies would reduce the potential for unstable soils to adversely affect proposed improvements to less than significant.

Mitigation Measures

MM 4.7-3: Obtain grading and building permits for any new structures.

Level of Significance after Mitigation

With the implementation of Mitigation Measure **MM 4.7-3**, impacts would be less than significant.

Impact 4.7-7: The project would be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

Expansive soils increase in volume when their moisture content becomes elevated. Improvements built on expansive soils could experience foundation cracking as a result of seasonal expanding and contracting of soils over time. The presence of expansive soils depends on site specific characteristics of underlying soils. The project may include the installation of buildings including the installation of new equipment on-site. The installation of any new buildings requires the issuance of a grading and/or building permit. Mitigation Measure **MM 4.7-3** has been proposed to reduce the potential impact to below a level of significance

Mitigation Measures

Implement Mitigation Measure **MM 4.7-3**

Level of Significance after Mitigation

With the implementation of Mitigation Measure **MM 4.7-3**, impacts would be less than significant.

Impact 4.7-8: The project would have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater.

The proposed project would not include installation of a new or expanded septic systems or other alternative wastewater disposal systems. Sanitary wastewater generated from the composting facility is treated by an existing septic system and is in place to continue to treat wastewater. Implementation of the proposed project would not substantially increase the demands on the existing septic system such that the system would need to be expanded and result in impacts to the environment. Therefore, impacts are expected to be less than significant, and mitigation is not required.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Impact 4.7-9: The project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Previous studies completed in the project area did not identify any unique paleontological resource or geologic features. Both the 1992 EIR and the 2002 SEIR for the SKICSP did not identify any unique paleontological resource or geologic features. The existing composting facility has been in active operation on the site since 2006 and the entire project site is extensively disturbed and considered mostly developed. It is unlikely that any previously recorded paleontological resources will be identified at the site. The existing composting facility has been in active operation on the site since 2006 and the entire 100-acre project site is extensively disturbed and considered entirely developed. Implementation of the proposed CUP modifications would not result surficial site disturbance to enable use for the expanded composting areas and limited excavation for installation of new equipment. Due to these factors, it is anticipated that no impacts would be expected to occur. However, in the unlikely event a paleontological resource(s) is found on-site, implementation of Mitigation Measure **MM 4.7-4** would reduce impacts to a less-than-significant level.

Mitigation Measures

MM 4.7-4 During implementation and operation of the project, if a paleontological resource is found, the project contractor shall cease ground-disturbing activities within 50 feet of the find. A qualified paleontologist shall evaluate the significance of the resource(s) and recommend appropriate treatment measures. At each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples shall be collected and submitted for analysis. Any fossils encountered and recovered shall be catalogued and donated to a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.7-4**, impacts would be less than significant.

Cumulative Setting, Impacts and Mitigation Measures

Impacts of the proposed project would be cumulatively considerable if they would have the potential to combine with similar impacts of other past, present, or reasonably foreseeable projects. Cumulative projects listed in **Table 3-3, *Cumulative Projects List***, would also be subject to similar seismic hazards. However, the effects of these projects are not of a nature to cause cumulatively significant effects from geologic impacts or on soils because such impacts are site specific and would only have the potential to combine with impacts of the project if they occurred in the same location as the project.

Development of the proposed project, with implementation of the regulatory requirements discussed above, would result in less-than-significant impacts related to exacerbating existing geologic, soils, or seismic hazards or exposing persons or structures to geologic, soils, or seismic hazards. Although the entire region is a seismically active, geologic and soil conditions can vary widely within a short distance. This results in a cumulative context for potential impacts resulting in exposure of people and structures to one that is more localized or even site-specific.

As is the case with the proposed project, other projects in the area would be required to adhere to California and Kern County Building Codes which are anticipated to reduce the risk to people and property to less-than-significant levels. In addition, while future seismic events cannot be predicted, adherence to the same federal, State, and local programs, requirements and policies pertaining to building safety and construction would limit the potential for injury or damage to a less-than significant level. Therefore, the project, combined with past, present, and other foreseeable development in the area, would not result in a cumulatively significant impact by exposing people or structures to risk related to geologic hazards, soils, and/or seismic conditions. Thus, construction and operation of the proposed project also would result in less than-significant cumulative impacts related to geology and soils.

Separate from subsurface geotechnical constraints and impacts, surficial deposits, namely erosion and sediment deposition, can be cumulative in nature, depending on the type and amount of development proposed in a given geographical area. The cumulative setting for soil erosion consists of existing, planned, proposed, and reasonably foreseeable land use conditions in the region. However, construction constraints are primarily based on specific sites within a proposed development and on the soil characteristics and topography of each site. Individual projects are required to comply with applicable codes, standards, and permitting requirements [e.g., preparation of a stormwater pollution prevention plan (SWPPP)] to mitigate erosion impacts. Development of the project site has the potential to contribute to soil erosion and loss of topsoil during construction. These potential impacts would be mitigated through the implementation of the SWPPP and best management practices (BMPs). In addition, dust suppression measures are included as part of the air quality mitigation measures in Section 4.3, *Air Quality*, of this EIR to reduce airborne pollutants. Impacts associated with erosion are mitigated on a project-by project basis, which would reduce the overall cumulative impact to a less than significant level.

Although construction activities have the potential to result in erosion on the project site, implementation of Mitigation Measures **MM 4.7-1** through **MM 4.7-4**, as well as the required SWPPP and BMPs (see **Section 4.10, *Hydrology and Water Quality***, Mitigation Measures **MM 4.10-1** and **MM 4.10-2**) would significantly reduce erosion from the project. Other cumulative scenario projects would be required to adhere to similar requirements, thereby minimizing cumulative scenario erosion impacts. Specifically, all planned projects in the vicinity of the proposed project are subject

to environmental review and would be required to conform to the Kern County General Plan and Building Code, and would implement additional mitigation of seismic hazards to ensure soil stability, especially related to seismically induced erosion. With implementation of Mitigation Measures **MM 4.7-1** through **MM 4.7-4** as well as Mitigation Measures **MM 4.10-1** and **MM 4.10-2**, the project would not contribute to any cumulative impacts for geologic, seismic hazards or related events. As a result, with implementation of mitigation, cumulative impacts related to geology and soils are less than significant.

Mitigation Measures

Implementation of Mitigation Measure **MM 4.7-1** through **MM 4.7-4**, **MM 4.10-1** and **MM 4.10-2** (see **Section 4.10**, *Hydrology and Water Quality* for full Mitigation Measure text).

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.7-1** through **MM 4.7-4**, **MM 4.10-1** and **MM 4.10-2** (see **Section 4.10**, *Hydrology and Water Quality* for full Mitigation Measure text), cumulative impacts would be less than significant.

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Section 4.8

Greenhouse Gases

4.8.1 Introduction

This section of the Environmental Impact Report (EIR) evaluates the greenhouse gas (GHGs) conditions associated with buildout of the proposed project. It also describes the impacts associated with GHGs that would result from implementation of the project, and, as necessary mitigation measures that would avoid or lessen these impacts. The analysis is largely based on information provided in the *Synagro South Kern Compost Manufacturing Facility Project (Air Quality and GHG Technical Report)* (Insight Environmental/Trinity Consultants 2020), prepared by Insight Environmental, a Trinity Consultants Company, for the project (Appendix B). Information supporting this analysis is also based on the information and guidelines provided in the California Environmental Quality Act (CEQA), the San Joaquin Valley Air Pollution Control District (SJVAPCD) 2015 Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), and Kern County's Guidelines for the Preparation of Air Quality Assessment for Environmental Impact Reports.

This continued operation of the composting facility would be subject to new state mandates to reduce GHG emissions, including methane from solid waste management activities, by reducing the volume and type of wastes disposed of in landfills, and increasing the volume of wastes that are composted and reused. The State of California continues to pass legislation directing more diversion from landfills, which results in a higher demand for resource recovery, recycling, and composting.

4.8.2 Environmental Setting

As described in **Chapter 3, Project Description**, the project site is an existing composting facility located at 2653 Santiago Road in unincorporated Kern County. The Project site is located approximately 12 mile east of the City of Taft and the unincorporated communities of Taft Heights and Ford City which are adjacent to the south and north of the City of Taft. The unincorporated communities of Dustin Acres and Valley Acres are located approximately 10 miles northwest of the project site along State Route (SR) 119. The project site is located within the administrative boundaries of the 744-acre South Kern Industrial Complex Specific Plan (SKICSP). The composting facility operates under Conditional Use Permit (CUP) No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) and covers a 100-acre section within an approximate 155-acre parcel. Existing composting operations cover approximately 44-acres of the permitted 100-acre area. The proposed modifications to the CUP would allow the Facility to receive and manage newly defined types of organic waste streams for composting, as required by CalRecycle. To enable processing of the expanded feedstock as required by the regulations, the existing area used for composting operations may be expanded by approximately 56 acres, to utilize the full 100 acres that is permitted for composting by the existing CUP. The modification to the CUP; however, would not change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre Compost Facility permitted under the existing CUP.

Greenhouse Gases (GHGs) and Global Climate Change

GHGs and climate change are a cumulative global issue. The California Air Resources Board (CARB) and U.S. Environmental Protection Agency (USEPA) regulate GHG emissions within the State of California and the United States, respectively. While the CARB has the primary regulatory responsibility within California for GHG emissions, local agencies can also adopt policies for GHG emission reduction. The CARB has divided California into regional air basins. The project is in unincorporated Kern County, which is within the San Joaquin Valley Air Basin (SJVAB), and under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD).

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

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

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

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

GHGs are present in the atmosphere naturally, released by natural sources, or formed from secondary reactions taking place in the atmosphere. They include CO₂, methane (CH₄), nitrous oxide (N₂O), and O₃. In the last 200 years, substantial quantities of GHGs have been released into the atmosphere,

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

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

Worldwide emissions of GHGs in 2008 were 30.1 billion metric tons of CO₂e and have increased considerably since that time. It is important to note that the global emissions inventory data are not all from the same year and may vary depending on the source of the data. Emissions from the top five emitting countries and the European Union accounted for approximately 55 percent of total global GHG emissions. The United States was the number two producer of GHG emissions. The primary GHG emitted by human activities in the United States was CO₂, representing approximately 84 percent of total GHG emissions.

In 2009, the United States emitted approximately 6.6 billion metric tons of CO₂e or approximately 25 tons per year (tpy) per person. Of the six major sectors nationwide (electric power industry, transportation, industry, agriculture, commercial, and residential), the electric power industry and transportation sectors combined account for approximately 62 percent of the GHG emissions; the majority of the electrical power industry and all of the transportation emissions are generated from direct fossil fuel combustion. Between 1990 and 2006, total United States GHG emissions rose approximately 14.7 percent.

Worldwide CO₂ emissions are expected to increase by 1.9 percent annually between 2001 and 2025. Much of the increase in these emissions is expected to occur in the developing world where emerging economies, such as China and India, fuel economic development with fossil fuel energy. Developing countries’ emissions are expected to grow above the world average at 2.7 percent annually between 2001 and 2025 and surpass emissions of industrialized countries around 2018.

CARB is responsible for developing and maintaining the California GHG emissions inventory. This inventory estimates the amount of GHGs emitted into and removed from the atmosphere by human activities within the state of California and supports the Assembly Bill (AB) 32 Climate Change Program. CARB’s current GHG emission inventory covers the years 1990 through 2008 and is based

on fuel use, equipment activity, industrial processes, and other relevant data (e.g., housing, landfill activity, and agricultural lands).

California's 2017 net emissions of 424 million metric tons of CO₂ equivalent (MMTCO₂e) decreased 5 MMTCO₂e from 2006 levels, with a decrease of 14 percent from maximum levels of 483.9 MMTCO₂e in 2004 and 7 MMTCO₂e below the 1990 emissions level which is the State's 2020 GHG limit. Transportation emissions continues to be the largest source of GHG emissions in the State. The annual increase of transportation emissions in 2017 has slowed down slightly compared to the previous three years. 2017 emissions also showed a 24 percent decrease per person since the peak year of 2001 dropping from 14.1 metric tons per person to 10.7 metric tons per person. CARB estimates that transportation was the source of approximately 40 percent of California's GHG emissions in 2017, followed by industrial sources at 21 percent and the electricity sector at 15 percent which showed another large drop due to the increase in renewable energy. Other sources of GHG emissions were residential plus commercial activities at 9.7 percent and agriculture at 7.6 percent.

Some of the potential resulting effects in California of global warming may include loss in snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. A summary of some of these potential effects that could be experienced in California as a result of climate change is provided below.

Sea Level Rise. Since 1870 the global sea level has risen about 8 inches. The rising sea level increases the likelihood and risk of flooding. Future sea level rise will vary for different reasons but is expected to rise at a greater rate than during the past 50 years. Regional factors, such as land elevation changes that occur due to subsidence or uplifting, will influence the relative sea level rise for the coastlines around the world. However, global sea level rise of 1 to 4 feet could occur by 2100 (USEPA 2017a).

Air Quality. Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State.

Water Supply. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10% during the last century. During the same period, sea level rose 8 inches along the California coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many southern California cities have experienced their lowest recorded annual precipitation twice within the past decade in a span of only 2 years.

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra Nevada snowpack provides the majority of California's water supply by accumulating snow during

our wet winters and releasing it slowly when we need it during our dry springs and summers. The Sierra Nevada snowpack is expected to experience a 25 to 40% reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (California Department of Water Resources [DWR] 2006).

Hydrology. As discussed previously, climate change could potentially affect the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for saltwater intrusion. Sea level rise may be a product of climate change through two main processes: expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply due to saltwater intrusion. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture. California has a \$30 billion agricultural industry and has the highest crop value in the nation serving as an important source of the nation's food supply. Changes in temperature and water availability, compounded by annual and seasonal shifts and extremes, will affect both crop yield and quality. Indirect impacts such as decreases of pollinators and increases in pests and diseases will also have a negative effect on agricultural yield.

Ecosystems and Wildlife. Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increase in drought, wildfire, invasive species, and pests as well as geographic ranges will threaten native ecosystems in the southwest. Over 3,000 native California species of plants are expected to face reductions in geographic ranges in which they can survive. Climate change and other stressors will hinder the species' ability to migrate or adapt. These stressors include human expansion, air and water pollution, invasive species, streamflow reductions, and the regions' mountainous terrain (DWR 2006).

Greenhouse Gas Emissions

GHGs refer to gases that absorb and re-emit infrared radiation in the atmosphere. Many chemical compounds found in Earth's atmosphere act as GHGs, which allow sunlight to enter the atmosphere freely. When sunlight strikes Earth's surface, some of it is reflected back toward space as infrared radiation (heat). GHGs absorb this infrared radiation and trap the heat in the atmosphere. Over time, the amount of energy sent from the sun to Earth's surface should be about the same as the amount of energy radiated back into space, leaving the temperature of Earth's surface roughly constant. Many gases exhibit these "greenhouse" properties. Some of them occur in nature (water vapor, carbon dioxide, methane, and nitrous oxide), while others are exclusively manmade (e.g., gases used for aerosols). The principal GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs), are listed below (USEPA 2017b).

- Carbon dioxide: CO₂ enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and chemical reactions (e.g., the manufacture of cement). CO₂ is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

- Methane: CH₄ is emitted during the production and transport of coal, natural gas, and oil. CH₄ emissions also result from livestock and agricultural practices and the decay of organic waste in municipal solid waste landfills.
- Nitrous oxide: N₂O is emitted during agricultural and industrial activities and during combustion of fossil fuels and solid waste.
- Fluorinated gases: HFCs, PFCs, and SF₆ are synthetic, powerful climate change gases emitted from a variety of industrial processes. Fluorinated gases are often used as substitutes for ozone-depleting substances (i.e., chlorofluorocarbons, hydrochlorofluorocarbons, and halons). These gases are typically emitted in minute quantities, but because they are potent climate-change gases, they are sometimes referred to as high GWP gases.
- Sulfur hexafluoride: SF₆ is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high-voltage equipment that transmits and distributes electricity, including equipment such as electrical circuit breakers, which may be used for the project. SF₆ is a potential source of fugitive emissions from electrical transmission and distribution equipment. Fugitive emissions are unintentional leaks of GHGs from equipment such as joints, seals, and gaskets.

In most cases, GHGs have both natural and anthropogenic (human-caused) sources. Natural mechanisms already exist as part of the “carbon cycle” for removing GHGs from the atmosphere (often called land or ocean sinks). Because of the increase in anthropogenic sources, levels of GHGs have exceeded the normal rates of natural absorption. This has resulted in increased atmospheric concentrations of GHGs and potentially human-induced climate change.

GHG emissions in the United States come mostly from energy use. These are driven largely by economic growth, fuel used for electricity generation, and weather patterns affecting heating and cooling needs.

Energy-related CO₂ emissions resulting from fossil fuel exploration and use account for approximately three-quarters of the human-generated GHG emissions in the United States, primarily in the form of CO₂ emissions from burning fossil fuels. More than half the energy-related emissions come from large stationary sources, such as power plants; approximately one-third come from transportation; and industrial processes, agriculture, forestry, other land uses, and waste management make up most of the other sources.

As previously stated, the generation of electricity can produce GHGs with criteria air pollutants that have been traditionally regulated under the Federal and State Clean Air Acts. For fossil fuel-fired power plants, the GHG emissions include primarily CO₂, with much smaller amounts of N₂O (not nitric oxide [NO] or nitrogen dioxide [NO₂], which are commonly known as nitrogen oxides [NO_x]), and CH₄ (often from unburned natural gas). For photovoltaic solar power energy generation projects, stationary-source GHG emissions are much smaller than fossil fuel-fired power plants, but the associated maintenance vehicle emissions are higher due to the different and far-afield maintenance requirements that necessitate more vehicles and more travel within the project site. Other sources of GHG emissions include SF₆ from high-voltage equipment and HFCs and PFCs from

refrigeration/chiller equipment. GHG emissions from the electricity sector are dominated by CO₂ emissions from carbon-based fuels; other sources of GHG emissions are small and are more likely to be easily controlled or reused/recycled.

Scientists at the California Office of Environmental Health Hazard Assessment (OEHHA) believe that most areas in the United States will continue to warm, although some will most likely warm more than others. Predicting which parts of the country will become wetter or drier is extremely difficult, but scientists generally expect increased precipitation and evaporation as well as drier soil in the middle parts of the country. The northern regions, such as Alaska, are expected to experience the most warming.

Emissions Inventory

CO₂ is the most common reference gas for climate change of the principal GHGs (i.e., CO₂, CH₄, N₂O, SF₆, PFCs, and HFCs). Using the GWP measurement, GHG emissions are often quantified and reported as CO₂ equivalent (CO₂e). Large emission sources are reported in million metric tons of CO₂e (MMT CO₂e). Worldwide, anthropogenic emissions of GHGs were approximately 49,500 MMT CO₂e in the year 2010 (IPCC 2014). CO₂ emissions from fossil fuel use accounts for 65% of the total emissions of 49,500 MMT CO₂e (includes land use changes) and CO₂ emissions from all sources account for 77 percent of the total. CH₄ emissions account for 16 percent of GHGs and N₂O emissions account for 6 percent (USEPA 2016b).

Based on data from the USEPA, the total GHG emissions in the United States were 6,677 MMT CO₂e in 2018, a 3.7% increase from 1990 levels. From year to year, emissions can rise and fall due to changes in the economy, the price of fuel, and other factors. In 2018 United States GHG emissions increased compared to 2017 levels. This increase was due to several factors, including increased energy use due to greater heating and cooling needs due to a colder winter and hotter summer in 2018 compared to 2017 (USEPA 2018).

Statewide emissions of GHG from relevant source categories for 2010 through 2017 are summarized in **Table 4.8-1**, *California Greenhouse Gas Emissions Inventory by Economic Sector*. In 2017 California produced 424.1 MMT CO₂e emissions. Transportation was the source of 40% of the State's GHG emissions, followed by industrial at 21%, electricity generation at 15%, commercial and residential sources at 10%, agriculture and forestry comprised at 8%, High GWP at 5%, and recycling and waste with the remaining 2% (CARB 2017a). CARB has projected that, unregulated, Statewide GHG emissions for the year 2020 will be 509 MMT CO₂e (CARB 2014). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions. California GHG emissions and the change in emissions of CO₂, CH₄, and N₂O from 2010 to 2017 are summarized in **Table 4.8-1**.

Table 4.8-1: California Greenhouse Gas Emissions Inventory by Economic Sector

Economic Sector	GHG Emissions* (MMTCO ₂ e)							
	2010	2011	2012	2013	2014	2015	2016	2017
Transportation	165.1	161.8	161.3	160.9	162.5	166.2	168.8	169.9
Electric Power	90.3	88.0	95.5	89.4	83.8	83.8	68.6	62.4
Industrial	91.5	90.2	91.1	93.7	91.5	91.5	89.5	89.4
Commercial and Residential	45.9	46.4	43.8	44.4	38.8	38.8	40.6	41.1
Agriculture	33.7	34.3	35.5	34.0	38.8	33.8	33.5	32.4
High GWP	13.5	14.5	15.5	16.8	18.6	18.6	19.3	19.9
Recycling and Waste	8.4	8.5	8.5	8.5	8.7	8.7	8.8	8.9
Total GHG Emissions	448.5	443.6	451.2	447.7	444.7	441.4	429.0	424.1

* GHG emissions are weighted using the IPCC AR4.

Source: CARB 2019

Kern County Greenhouse Gas Inventory

On May 3, 2011, the Kern County Board of Supervisors signed a memorandum of understanding with the SJVAPCD to develop a communitywide GHG emissions inventory for the County. The *Kern County Communitywide GHG Emissions Inventory 2055 Baseline Year – 2020 Forecast* was finalized in May 2012. The GHG emission inventories were estimated for nine primary sectors (electricity production and consumption, residential/commercial/industrial combustion, transportation, fossil fuels industry, industrial processes, waste management, agriculture, forestry and land use, and other sources). The 2005 base year and 2020 forecasted GHG emissions inventory is presented below in Table 4.8-2, *Kern County Greenhouse Gas Emissions (MTCO₂e)*. As shown therein, the 2005 base year GHG emissions inventory was estimated at 27.0 million MTCO₂e and the 2020 forecasted GHG emissions inventory was estimated to be 27.3 million MTCO₂e. Electricity production was estimated to generate 13,002,127 MTCO₂e in 2005 and 18,455,958 MTCO₂e in 2020. Electricity consumption during both the 2005 base year and 2020 forecasted year is provided in **Table 4.8-2**, on the following page.

Table 4.8-2 Kern County Greenhouse Gas Emissions (MTCO₂e)

Sector	2005 Base Year Emissions	Percent of 2005 Total	2020	
			Forecasted Emissions	Percent of 2020 Total
Electricity Consumption	6,039,114	22%	8,572,261	31%
Residential/Commercial/Industrial Combustion	1,281,498	5%	1,689,414	6%
Transportation	4,569,913	17%	4,823,756	18%
Fossil Fuels Industry	10,928,153	40%	7,002,009	26%
Industrial Processes	1,852,124	7%	2,348,754	9%
Waste Management	120,494	<1%	146,788	1%
Agriculture	2,024,470	7%	2,652,616	10%
Forestry and Land Use	11,028	<1%	14,669	<1%
Other Sources	218,823	1%	22,442	<1%
Total Gross Emissions	27,045,617		27,272,709	

Source: SJVACPD, 2012.

4.8.3 Regulatory Setting

Regulatory oversight for air quality in the SJVAB rests at USEPA Region IX office at the Federal level, the CARB at the State level, and the regional level with the SJVAPCD.

Global Climate Change Regulatory Issues

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

On September 27, 2006, Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006 (the Act) was enacted by the State of California. The legislature stated, “global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California.” The Act caps California’s GHG emissions at 1990 levels by 2020. The Act defines GHG emissions as all of the following gases: carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. This agreement represents the first enforceable statewide program in the U.S. to cap all GHG emissions from major industries that includes penalties for non-compliance. While acknowledging that national and international actions will be necessary to fully address the issue of global warming, AB 32 lays out a program to inventory and reduce GHG emissions in California and from power generation facilities located outside the state that serve California residents and businesses.

AB 32 charges CARB with responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. CARB has adopted a list of discrete early action measures that can be implemented to reduce GHG emissions. CARB has defined the 1990 baseline emissions for California and has adopted that baseline as the 2020 statewide emissions cap. CARB is conducting rulemaking for reducing GHG emissions to achieve the emissions cap by 2020. In designing emission reduction measures, CARB must aim to minimize costs, maximize benefits, improve and modernize California's energy infrastructure, maintain electric system reliability, maximize additional environmental and economic co-benefits for California, and complement the state's efforts to improve air quality.

Global warming and climate change have received substantial public attention for more than 20 years. For example, the United States Global Change Research Program was established by the Global Change Research Act of 1990 to enhance the understanding of natural and human-induced changes in the Earth's global environmental system, to monitor, understand and predict global change, and to provide a sound scientific basis for national and international decision-making. Even so, the analytical tools have not been developed to determine the effect on worldwide global warming from a particular increase in GHG emissions, or the resulting effects on climate change in a particular locale. The scientific tools needed to evaluate the impacts that a specific project may have on the environment are even farther in the future.

The California Supreme Court's recent CEQA decision on the Newhall Ranch development case, *Center for Biological Diversity v. California Department of Fish and Wildlife* ((2015) 62 Cal.4th 2014), determined that the project's EIR did not substantiate the conclusion that the GHG cumulative impacts would be less than significant. The EIR determined that the Newhall Ranch development project would reduce GHG emissions by 31 percent from business as usual (BAU). This reduction was compared to the California's target of reducing GHG emissions statewide by 29 percent from business as usual. The Court determined that "the EIR's deficiency stems from taking a quantitative comparison method developed by the Scoping Plan as a measure of the greenhouse gas reduction effort required by the state as a whole, and attempting to use that method, without adjustments, for a purpose very different from its original design." In the Court's final ruling it offered suggestions that were deemed appropriate use of the BAU methodology:

- Lead agencies can use the comparison to BAU methodology if they determine what reduction a particular project must achieve in order to comply with statewide goals,
- Project design features that comply with regulations to reduce emissions may demonstrate that those components of emissions are less that significant, and
- Lead agencies could also demonstrate compliance with locally adopted climate plans or could apply specific numerical thresholds developed by some local agencies.

The current inventory and forecast for GHG emissions in the California Air Resources Board's 2014 First Update to the Climate Change Scoping Plan supports the recent changes to IPCC's 2011 estimates by calculating GWPs of the various GHGs. CARB now uses GWPs in its climate change programs and to estimate the various impacts. Using the IPCC's Fourth Assessment Report, CARB has recalculated the 1990 GHG emissions level to be 431MMTCO₂e. Therefore, the 2020 emissions

limit established in response to AB 32 is now slightly higher than the 427MMTCO₂e that was identified in the initial Scoping Plan. It is widely understood that climate change is a “global” issue and, as such, GHG emissions are a cumulative problem and can only be evaluated as such.

As discussed above, the SJVAPCD, a CEQA Responsible Agency for this project, has developed thresholds to determine significance of a proposed project – either implement Best Performance Standards or achieve a 29 percent reduction from BAU (a specific numerical threshold). Therefore, the 29 percent reduction from BAU is applied to the subject project in order to determine significance. Therefore, the GHG analysis for this project follows the suggestions from the Court’s ruling on the Newhall Ranch development project in order to determine significance using the project design features.

Federal

U.S. Environmental Protection Agency (USEPA)

The federal Clean Air Act (CAA) requires the USEPA to define national ambient air quality standards to protect public health and welfare in the U.S. The USEPA has not established any ambient air quality standards for GHGs as the CAA does not specifically regulate GHG emissions; however, in 2007, in *Massachusetts v. U.S. Environmental Protection Agency*, the U.S. Supreme Court found that GHGs are pollutants covered under the CAA. The Court held that the USEPA must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the USEPA is required to follow the language of Section 202(a) of the CAA. The Supreme Court decision resulted from a petition for rulemaking under Section 202(a) filed by more than a dozen environmental, renewable energy, and other organizations. Currently, there are no federal regulations that establish ambient air quality standards for GHGs.

In 2009, the USEPA Administrator signed Proposed Endangerment and Cause or Contribute Findings for GHGs under Section 202(a) of the CAA. The USEPA found that six GHGs taken in combination endanger both the public health and the public welfare of current and future generations. The USEPA also found that the combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the greenhouse effect as air pollution that endangers public health and welfare under Section 202(a) of the CAA. The Findings were based on careful consideration of the full weight of scientific evidence and a thorough review of numerous public comments received on the Proposed Findings, made effective in 2010.

In 2009, the USEPA adopted its Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the CAA (Endangerment Finding). The Endangerment Finding is based on Section 202(a) of the CAA, which states that the USEPA administrator should regulate and develop standards for “emission[s] of air pollution from any class or classes of new motor vehicles or new motor vehicle engines, which in [its] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.” The rule addresses Section 202(a) in two distinct findings. The first addresses whether the concentrations of the six key GHGs (CO, CH₄, N₂O, HFCs, PFCs, and SF₆) in the atmosphere threaten the public health and welfare of current and future generations. The second addresses whether the combined emissions of GHGs from new motor

vehicles and motor vehicle engines contribute to atmospheric concentrations of GHGs and, therefore, contribute to the threat of climate change.

The USEPA Administrator found that atmospheric concentrations of GHGs endanger the public health and welfare within the meaning of Section 202(a) of the CAA. The evidence supporting this finding consists of human activity resulting in “high atmospheric levels” of GHG emissions, which are likely responsible for increases in average temperatures and other climatic changes. Furthermore, the observed and projected results of climate change (e.g., higher likelihood of heat waves, wildfires, droughts, sea level rise, and higher intensity storms) are a threat to the public health and welfare. Therefore, GHGs were found to endanger the public health and welfare of current and future generations.

The USEPA’s final Findings respond to the 2007 U.S. Supreme Court decision that GHGs fit within the CAA definition of air pollutants. These two distinct findings by the USEPA were based on careful consideration of the full weight of scientific evidence and a thorough review of numerous public comments received on the Proposed Findings, published in 2009 as Title 40 of the Code of Federal Regulations (CFR), Part 98: Mandatory Green House Gas Reporting (40 CFR 98).

Specific GHG Regulations that the USEPA has adopted (to date) include:

40 CFR Part 98. Mandatory Reporting of Greenhouse Gases Rule

This rule requires mandatory reporting of GHG emissions for facilities that emit more than 25,000 metric tons (MT) of CO₂e emissions per year. Additionally, reporting of emissions is required for owners of SF₆- and PFC- insulated equipment when the total nameplate capacity of these insulating gases is above 17,280 pounds.

40 CFR Part 52. Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule

The USEPA mandated to apply Prevention of Significant Deterioration (PSD) requirements to facilities whose stationary source CO₂e emissions exceed 75,000 tons per year.

National Climate Action Plan

In June 2013, the President enacted a national Climate Action Plan (Plan) that consisted of a wide variety of executive actions and had three pillars discussed below.

Cut Carbon in America: The Plan consists of actions to help cut carbon by deploying clean energy such as cutting carbon from power plants, promoting renewable energy, and unlocking long-term investment in clean energy innovation.

Prepare the United States for Impacts of Climate Change: The Plan consists of actions to help prepare for the impacts through building stronger and safer communities and infrastructure by supporting climate resilient investments, supporting communities and tribal areas as they prepare for impacts, and boosting resilience of building and infrastructure; protecting the economy and natural resources by identifying vulnerabilities, promoting insurance leadership, conserving land and water

resources, managing drought, reducing wildfire risks, and preparing for future floods; and using sound science to manage climate impacts.

Lead International Efforts: The Plan consists of actions to help the United States lead international efforts through working with other countries to take action by enhancing multilateral engagements with major economies, expanding bilateral cooperation with major emerging economies, combating short-lived climate pollutants, reducing deforestation and degradation, expanding clean energy use and cutting energy waste, global free trade in environmental goods and services, and phasing out subsidies that encourage wasteful use of fossil fuels and by leading efforts to address climate change through international negotiations.

In June of 2014, the Center for Climate and Energy Solutions (C2ES) published a one-year review of progress in implementation of the Plan. The C2ES found that the administration had made marked progress in its initial implementation. Notable areas of progress included steps to limit carbon pollution from power plants; improve energy efficiency; reduce CH₄ and HFC emissions; help communities and industry become more resilient to climate change impacts; and end U.S. lending for coal-fired power plants overseas.

Greenhouse Gas Endangerment Findings

As of January 14, 2010, the USEPA's finding that six GHGs, taken in combination, endanger the public health and the public welfare of current and future generations became effective. The USEPA also found that the combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that endangers public health and welfare under CAA Section 202(a). Subsequently, federal agencies have adopted specific GHG-related regulations and initiatives, including:

Transportation/Mobile Sources

USEPA and National Highway Traffic Safety Administration Standards to Cut Greenhouse Gas Emissions and Fuel Use for New Motor Vehicles: coordinated steps to enable the production of a new generation of clean vehicles.

Renewable Fuel Standard Program: transportation fuel sold in the United States is required to contain a minimum volume of renewable fuel.

Stationary Sources

Carbon Pollution Standards for Power Plants: In September 2013, the USEPA proposed a rule to reduce carbon emissions from new power plants. On June 2, 2014, the USEPA issued a proposal to cut carbon pollution from existing power plants (the "Clean Power Plan"). On June 19, 2019, the USEPA published a final rule repealing the Clean Power Plan, adopting the Affordable Clean Energy (ACE) rule requiring States to prepare and submit to the USEPA plans that establish CO₂ performance standards for certain existing coal-fired electric utility-generating units within their jurisdiction, and finalizing regulations governing implementation of the ACE rule and any future emissions guidelines that the USEPA may issue under CAA Section 111(d). Also on June 19, 2019, California Governor Gavin Newsom's office published a press release stating that California "and a coalition of states" will initiate a legal challenge of the ACE.

Final Greenhouse Gas Tailoring Rule: On May 13, 2010, the USEPA set GHG emissions thresholds to define when permits under the New Source Review PSD and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule “tailors” the requirements of these CAA permitting programs to limit covered facilities to the nation’s largest GHG emitters: power plants, refineries, and cement production facilities.

Timing of Applicability of the PSD Permitting Program to GHGs: On March 29, 2010, the USEPA completed its reconsideration of the December 18, 2008, memorandum entitled “EPA’s Interpretation of Regulations that Determine Pollutants Covered by the PSD Permit Program” (the so-called “Johnson memo”). The final action confirmed that GHGs become covered under the PSD program on January 2, 2011, when the cars rule took effect.

In June 2014, the U.S. Supreme Court ruled that the USEPA cannot classify facilities as major PSD or Title V sources based solely on its GHG emissions meeting the major source threshold. However, the Supreme Court said that the USEPA could continue to require that PSD permits, required due to criteria pollutant emissions, contain Best Available Control Techniques (BACT) limits for GHG emissions. This ruling struck down Step 2 of the Tailoring Rule but kept in effect Step 1.

Emissions Reporting

GHG Reporting Program: This program collects reported GHG emissions from facilities that emit more than 25,000 MTCO_{2e} emissions per year. Additionally, reporting of emissions is required for owners of SF₆- and PFC-insulated equipment when the total nameplate capacity of these insulating gases is above 17,280 pounds. The Petroleum and Natural Gas Systems source category consists of onshore production; offshore production; natural gas processing; natural gas transmission; underground natural gas storage; natural gas distribution; liquefied natural gas import and export terminals; and liquefied natural gas storage equipment.

Notification Requirements for Gas Well Completions (40 CFR Parts 60 and 63): Air pollution standards established by the USEPA under the New Source Performance Standard, Final Rule August 16, 2012, for oil and gas production require companies to provide notifications of natural gas well completions. The USEPA expects to use the notifications required by the 2012 standards and ongoing technical studies through 2014 to make a foundation for determining how best to require additional control of methane and other air pollutants from the oil and gas sector, including completions and associated gas from ongoing production and hydraulically fractured oil wells.

Federal Vehicle Standards

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

In August 2018, the USEPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new standards for model years 2021

through 2026. Compared to maintaining the post-2020 standards now in place, the 2018 proposal would increase U.S. fuel consumption by about half a million barrels per day (2 to 3% of total daily consumption, according to the U.S. Energy Information Administration [USEIA]) and would impact the global climate by 3/1000th of 1 degree Celsius by 2100 (USEPA and NHTSA 2018). California and 16 other states have filed a lawsuit to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. Thus, the timing and consequences of the 2018 federal proposal are speculative at this time. Further, the current chair of the CARB (Mary Nichols) has announced that the CARB will continue to file lawsuits to reverse any Trump administration decision to lessen vehicle efficiency standards, decline to allow California to enforce more stringent vehicular air pollution standards under the waiver procedure established by the Federal CAA, or otherwise reduce the stringency of federal air pollution regulations, and has further announced CARB's intention to continue to independently enforce federal standards in California while such lawsuits are pending. It is not reasonably foreseeable that less stringent Federal air pollution standards will be applicable to the project given independent California authority, the length of time required to complete the Federal litigation process, the absence of any injunction precluding California from enforcing more stringent Federal standards while such lawsuits are present, and the CARB's announced intention to continue to enforce Federal air regulations rescinded or modified by the Trump administration.

Fuel Efficiency Standards for Construction Equipment. The federal government sets fuel efficiency standards for non-road diesel engines that are used in construction equipment. The regulations, contained in 40 CRF Parts 1039, 1065, and 1068, include multiple tiers of emission standards. Most recently, the USEPA adopted a comprehensive national program to reduce emissions from non-road diesel engines by integrating engine and fuel controls as a system to gain the greatest reductions. To meet these Tier 4 emission standards, engine manufacturers will produce new engines with advanced control technologies (USEPA, 2004).

State

The State of California has been very active in the area of climate change regulation. Most of this is an outgrowth of AB 32, which is the basis upon which most of California's climate change regulation is based. A second bill, Senate Bill (SB) 32, went further in reducing future GHG emissions in the state. These laws are described below, along with a variety of laws, rules, regulations, and executive orders designed to reduce the emissions of GHG from activities in and supporting the State of California. There are a variety of statewide and local air pollution control district (APCD)-level rules and regulations that have been implemented or are in development in California that mandate the quantification or reduction of GHGs. Under CEQA, an analysis and mitigation of emissions of GHGs and climate change in relation to a project is required when it has been determined that a project will result in a significant increase in GHGs. However, neither thresholds of significance nor methods of analysis have been defined in CEQA. Certain APCDs have proposed their own levels of significance.

California Environmental Quality Act

A variety of Statewide rules and regulations have been implemented or are in development in California that mandate the quantification or reduction of GHGs. Under the California Environmental Quality Act (CEQA), an analysis and mitigation of emissions of GHGs and climate

change in relation to a project is required where it has been determined that a project will result in a significant addition of GHGs. Certain Air Pollution Control Districts (APCDs) have proposed their own levels of significance. The SJVAPCD, which has regulatory authority over the air pollutant emissions from this project, has adopted a significance threshold for projects where the SJVAPCD acts as CEQA Lead Agency (SJVAPCD 2009); however, Kern County has not adopted a significance threshold for these emissions.

California Supreme Court Ruling In *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal.4th 2014 (Newhall)

In *Center for Biological Diversity v. Department of Fish and Wildlife* (Newhall), the Supreme Court evaluated the California Department of Fish and Wildlife (CDFW) analysis of potential impacts caused by GHG emissions contained in the EIR for the proposed land development called Newhall Ranch. In the EIR, the CDFW analyzed GHG emissions under Assembly Bill (AB) 32, using the business-as-usual (BAU) comparison as its sole criterion of significance.

In *Newhall*, the Supreme Court concluded that a finding of consistency with meeting Statewide emission reduction goals is a legally permissible criterion of significance when analyzing potential impacts of GHG emissions under CEQA. However, the Court found that the EIR's conclusion that the project's emissions would be less than significant under that criterion was not supported by substantial evidence, and remanded back to the appellate court the narrow issue of whether substantial evidence supported the application of AB 32 Statewide GHG reduction goal of 29% to new land use projects.

The Court then identified "potential options" for lead agencies evaluating cumulative significance of a proposed land use development's GHG emissions in future CEQA documents, but the Court was careful to note that there was no "guarantee" that any of these would be sufficient, stating: "We do not, of course, guarantee that any of these approaches will be found to satisfy CEQA's demands as to any particular project; what follows is merely a description of potential pathways to compliance, depending on the circumstances of a given project."

The "potential pathways to compliance" suggested by the Court are as follows:

Business-As-Usual (BAU) Model: While the Court cautioned that the Scoping Plan may not be appropriate at the project-level, the BAU model might be used to determine what level of reduction from business as usual a new land use development at the proposed location must contribute in order to comply with statewide goals pursuant to AB 32. The Court specifically directed that reliance on this type of quantitative threshold must be supported by substantial evidence in the record that links the statewide GHG reduction standard to the appropriate GHG reduction standard for the specific type of project under consideration.

- 1. Compliance With Regulatory Programs Designed To Reduce Greenhouse Gas Emissions:** The Court suggests that a lead agency could rely on a showing of compliance with regulatory programs designed to reduce GHG emissions in order to demonstrate consistency with AB 32's goals. The Court clarifies that a significance analysis based on compliance with such statewide regulations only goes to impacts within the area governed by the regulations.

2. **Local Climate Action Plan or Other “Geographically Specific Greenhouse Gas Emission Reduction Plans”:** The Court points out that these plans may provide a basis for the tiering or streamlining of project-level CEQA analysis, so long as the plan is “sufficiently detailed and adequately supported.”
3. **Regional Sustainable Community Strategy (SCS):** The Court also articulates that a Lead Agency need not additionally analyze GHG emissions from cars and light trucks in CEQA documents for certain residential, mixed-use, and transit priority projects that are consistent with an applicable SCS adopted pursuant to Senate Bill (SB) 375.
4. **Numerical GHG Significance Thresholds:** Although noting that use of such thresholds is not required, the Court favorably cited to the Bay Area Air Quality Management District GHG significance thresholds, based on compliance with AB 32, which use a “service population” GHG ratio threshold for land use projects and a 10,000-ton annual GHG emission threshold for industrial projects. The Court remanded for further consideration the application of the 29% overall Scoping Plan metric, which is used by several Air Districts and, like the favorably cited Bay Area Air Quality Management District metric, is based on AB 32.
5. **Executive Orders S-3-05 and B-30-15:** Citing to EOs S-3-05 and B-30-15, the Court cautioned that those EIRs taking a goal-consistency approach to CEQA significance may “in the near future” need to consider the project’s effects on meeting emissions reduction targets beyond 2020.

Following the Supreme Court’s decision in *Newhall*, the EIR at issue in that case was set aside on remand by the lower court. On November 2016, the CDFW released a draft Additional Environmental Analysis (AEA) intended to address the agency’s CEQA compliance obligations (CDFW 2016). The AEA does not respond to the Supreme Court’s direction to provide substantial evidence supporting the 29% BAU statutory GHG reduction threshold relied upon by the *Newhall* EIR. The AEA also does not include an assessment of the *Newhall* project’s consistency with any of the Court’s suggested GHG CEQA compliance pathways, although referenced documentation in the *Newhall* administrative record do include and confirm compliance with each pathway. Instead, as described in the AEA, the *Newhall* project applicant (Five Point LLC) voluntarily modified its project and proposed to achieve “net zero” GHG emissions for the project with the implementation of the project applicant’s “zero net emission” proposal, which was made enforceable by the addition of 13 mitigation measures that correspond to the applicant’s proposal, as further described in the AEA. The AEA states that the adoption and implementation of the 13 mitigation measures would reduce mobile source, electricity, natural gas, vegetation removal, and construction-related emissions by the amount of emissions estimated for the project and result in no net contributions of GHG emissions from the project, or “zero net emissions.” The AEA further concludes that because the project would result in no net increase of GHG emissions after implementation of the mitigation measures, there would be no contribution of GHG emissions to cumulative GHG emissions influencing global climate change and the *Newhall* project would not conflict with any plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs. Consequently, the AEA concludes that project GHG and climate change impacts would be less than significant (CDFW 2016, pp. 1–18).

Assembly Bill 1493

On July 22, 2002, former Governor Gray Davis signed AB 1493, also known as the Pavley Regulations or the Clean Car Standards. AB 1493 required the State to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of GHG emissions emitted by passenger vehicles and light-duty trucks. Subsequent regulations were adopted by the CARB in September 2004.

The regulations were threatened by automaker lawsuits and were stalled by the USEPA's initial denial to allow California to implement GHG standards for passenger vehicles. The USEPA later granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles on June 30, 2009. On September 24, 2009, the CARB adopted amendments to the Pavley regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.

Assembly Bill (AB) 32

In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. The legislature stated, "global warming poses a serious threat to the economic wellbeing, public health, natural resources, and the environment of California." AB 32 caps California's GHG emissions at 1990 levels by 2020 and requires the CARB, the State agency charged with regulating statewide air quality, to adopt rules and regulations that would achieve GHG emissions equivalent to Statewide levels in 1990 by 2020. This law establishes periodic targets for reductions, and requires certain facilities to report emissions of GHGs annually; AB 32 also reserves the ability to reduce emissions targets for certain sectors that contribute the most to emissions of GHGs, including the transportation sector.

This agreement represents the first enforceable statewide program in the U.S. to cap all GHG emissions from major industries that includes penalties for non-compliance. While acknowledging that national and international actions will be necessary to fully address the issue of global warming, AB 32 lays out a program to inventory and reduce GHG emissions in California and from power generation facilities located outside the state that serve California residents and businesses.

The list of impacts included in AB 32 may be considered substantial evidence of environmental impacts requiring analysis in CEQA documents. AB 32 charges the CARB with responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. The CARB has adopted a list of discrete early action measures that can be implemented to reduce GHG emissions. The CARB has defined the 1990 baseline emissions for California and has adopted that baseline as the 2020 statewide emissions cap. CARB is conducting rulemaking for reducing GHG emissions to achieve the emissions cap by 2020. In designing emission reduction measures, the CARB must aim to minimize costs, maximize benefits, improve and modernize California's energy infrastructure, maintain electric system reliability, maximize additional environmental and economic co-benefits for California, and complement the state's efforts to improve air quality.

The AB 32 Scoping Plan contains the main strategies California will use to reduce the GHG emissions that cause climate change. The scoping plan has a range of GHG emission reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and nonmonetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB

32 cost of implementation fee regulation to fund the program. The proposed scoping plan was released on October 15, 2008 and approved at the Board hearing on December 12, 2008.

On October 20, 2011, the CARB approved a cap-and-trade program as part of AB 32, with compliance obligations that became effective in 2013. An initial cap will be implemented for the electrical sector and any large industrial source that emits more than 25,000 MTCO_{2e} emissions per year. Over time, the cap will be reduced so that the program will apply to a broader range of facilities.

In May 2014, CARB adopted a Scoping Plan Update that revised the 2020 emissions target to 431 MMTCO_{2e} (based on updated GWPs for GHGs) and also builds upon the initial Scoping Plan with new strategies and recommendations. The 2014 Scoping Plan Update identified opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The 2014 Scoping Plan Update also defined the CARB's climate change priorities for the following 5 years and set the groundwork to reach California's long-term climate goals set forth in EO S-3-05 and B-16-2012. EO B-16-2012 directed State entities under the governor's direction and control to support and facilitate development and distribution of zero-emission vehicles (ZEVs). Former Governor Jerry Brown's executive order set a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a Statewide basis, the executive order also established a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050.

Assembly Bill 32 Scoping Plan Update

In December 2017, the CARB adopted California's 2017 Climate Change Scoping Plan (CARB 2017). The 2030 target of 40% emissions reductions below 1990 levels guides the Scoping Plan, as the economy evolves to reduce GHG emissions in every sector. The 2017 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update, while identifying new technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target as established by SB 32 and define the state's climate change priorities to 2030 and beyond. The strategies' known commitments include implementing renewable energy and energy efficiency (including the mandates of SB 350), increasing stringency of the, implementing measures identified in the Mobile Source and Freight Strategies, implementing measures identified in the proposed Short-Lived Climate Pollutant Plan, and increasing stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, it recommends continuing the Cap-and-Trade Program; continuing Low Carbon Fuel Standard activities, with increasing stringency of at least 18% reduction in carbon intensity; and a measure to reduce GHGs from refineries by 20%.

The Supreme Court has determined that a Scoping Plan is not self-implementing (i.e., is not a regulation), and in the Newhall case described above, the Supreme Court further concluded that consistency with Scoping Plan overall targets is not an appropriate threshold of significance for determining CEQA impacts, notwithstanding arguments presented to the Court in that case that CEQA requires either a "net zero" GHG emissions significance threshold or the unlegislated EO 2050 target significance threshold.

Assembly Bill 398 Extension of Cap-and-Trade

On July 25, 2017, former Governor Jerry Brown signed into law AB 398, which reauthorizes the continuation of the Cap-and-Trade Program through December 31, 2030.

Senate Bill 97

SB 97, enacted in August 2007, required the Office of Planning and Research (OPR) to develop guidelines for the mitigation of GHG emissions or effects related to releases of GHG emissions. On April 13, 2009, OPR submitted proposed amendments to the California Natural Resources Agency (CNRA), in accordance with SB 97, regarding analysis and mitigation of GHG emissions. Formal rulemaking was conducted in 2009 prior to adopting the amendments.

As part of the guidelines, OPR recommends that CARB set statewide thresholds of significance and emphasized the need to have a consistent threshold available to analyze projects. The draft guidelines also noted that the analyses should be based on the best available information. As directed by SB 97, the CNRA adopted amendments to the State CEQA Guidelines for GHG emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the amendments and filed them with the Secretary of State for inclusion in the California Code of Regulations. The amendments became effective on March 18, 2010.

Other Mobile Source Reduction Requirements

Several other State provisions address the GHG emissions reduction targets set by CARB for mobile sources, including trucks, passenger vehicles, trains, and ships. These measures include:

- Low Carbon Fuel Standard (EO S-01-07)
- Advanced Clean Cars Program
- SmartWay Truck Efficiency Regulation
- AB 32 Cap-and-Trade Program as applicable to transportation fuel suppliers (beginning January 1, 2015)
- SB 375 (Land Use Planning) including the development of a Sustainable Communities Strategy as part of a Metropolitan Planning Organization's Regional Transportation Plan.

In particular, 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 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.

California Air Pollution Control Officers Association (CAPCOA)

The California Air Pollution Control Officers Association (CAPCOA) is the association of air pollution control officers representing all 35 air quality agencies throughout California. CAPCOA is not a regulatory body, but it has been an active organization in providing guidance in addressing the CEQA significance of GHG emissions and climate change as well as other air quality issues. The GHG analysis set forth in this report has been informed, in part, by the expertise and methodologies described in the following documents published by CAPCOA: (1) CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act; and (2) Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures. The methodologies used in this GHG analysis are consistent with the CAPCOA guidelines.

California Air Resources Board Cap-and-Trade for Stationary Sources and Fuels

The SJVAPCD approved Policy APR-2025 (CEQA Determinations of Significance for Projects Subject to CARB's GHG Cap-and-Trade Regulation) to evaluate whether projects subject to the cap-and-trade regulation would comply with plans for reducing GHG emissions supported by an environmental review compliant with CEQA requirements, and that compliance with this plan would adequately mitigate GHG emissions for CEQA purposes under the SJVAPCD thresholds.

SJVAPCD concluded that the cap-and-trade regulation is such a plan, and that compliance would result in a project having a less-than-significant impact for GHG emissions that are subject to the cap-and-trade regulations. The cap-and-trade regulation applies to providers of electricity generated or imported into California, large industrial facilities emitting more than 25,000 MTCO_{2e} per year, and other specific facilities, as well as to distributors of transportation fuels, natural gas, and other fuels. The regulation requires that emissions generated by these facilities and combustion of fuels be reduced over time. Accordingly, the SJVAPCD found that "GHG emission increases caused by fuel use (other than jet fuels [which are not regulated under the cap-and-trade regulation]) are determined to have a less-than-significance impact on global climate change under CEQA." SJVAPCD Policy APR-2015 is consistent with the recent case *Association of Irrigated Residents v. Kern County Board of Supervisors, et al.* (2017) 17 Cal.App.5th 708 ("AIR"), wherein the Court of Appeal held that CEQA does in fact authorize a Lead Agency "to determine a project's greenhouse gas emissions will have a less than significant effect on the environment based on the project's compliance with the cap-and-trade program."

Executive Orders

The current and prior Governors also issued several executive orders regarding climate change and GHG reductions. These orders include, but are not limited to, the following discussed below.

Executive Order S-1-07

Issued on January 18, 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_{2e} grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption,

per unit of energy delivered. The CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste. In addition, the Low Carbon Fuel Standard would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles. The Low Carbon Fuel Standard is anticipated to lead to the replacement of 20% of the fuel used in motor vehicles with alternative fuels by 2020.

Executive Order S-3-05

EO S-3-05 was established by former Governor Arnold Schwarzenegger in June 2005. EO S-3-05 establishes Statewide emission reduction targets through the year 2050:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

This executive order does not include any specific requirements that pertain to the project. However, actions taken by the State to implement these goals could affect this project, depending on the specific implementation measures that are developed.

Executive Order S-13-08

Former Governor Arnold Schwarzenegger issued EO S-13-08 on November 14, 2008. The executive order is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. It directs State agencies to take specified actions to assess and plan for such impacts. It directs the CNRA, in cooperation with the DWR, CEC, California's coastal management agencies, and the Ocean Protection Council, to request that the National Academy of Sciences prepare a Sea Level Rise Assessment Report to assess the State's vulnerability. The report summarizes key climate change impacts to the State for the following areas: public health, ocean and coastal resources, water supply and flood protection, agriculture, forestry, biodiversity and habitat, and transportation and energy infrastructure. The report then recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

Executive Order B-18-12

Former Governor Jerry Brown issued EO B-18-12 on April 25, 2012. The executive order directs State agencies, departments, and other entities under the governor's executive authority take actions to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline.

Executive Order B-30-15

On April 29, 2015, former Governor Jerry Brown issued EO B-30-15, which identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32.

Executive Order B-55-18

EO B-55-18 (September 2018) establishes a Statewide policy for the State to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. The goal is an addition to the existing Statewide targets of reducing the State's GHG emissions. The CARB will work with relevant State agencies to ensure that future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

Association of Irrigated Residents (AIR) v. Kern County Board of Supervisors (2017) 17 Cal.App.5th 708

In *AIR*, the Court of Appeal held that CEQA authorized a Lead Agency to reduce the volume of a project's estimated GHG emissions to reflect the use of cap-and-trade compliance instruments when assessing the significance of a project's GHG emissions. Specifically, the *AIR* court held that, for purposes of State CEQA Guidelines Section 15064.4(b)(2), the Cap-and-Trade Program qualifies as a Statewide regulatory program for the reduction of GHG emissions, and CEQA thus authorizes a Lead Agency "to determine a project's GHG emissions will have a less than significant effect on the environment based on a project's compliance with the cap-and-trade program." On January 31, 2018, the Supreme Court declined review of the *AIR* decision. Therefore, *AIR* is controlling law.

California Code of Regulations Title 17

The CARB adopted amendments to regulations implementing the Cap-and-Trade Program in 2017, consistent with and in furtherance of AB 398's extension of the Cap-and-Trade Program discussed above.

California Code of Regulations Title 14, Chapter 3

The CNRA and OPR adopted the updated State CEQA Guidelines in December 2018; however, the updated guidelines did not change the guidelines or Appendix G (often used as default CEQA significance standards) relating to GHG. The guidelines did adopt new CEQA provisions regarding VMT as CEQA impacts as of July 1, 2020, based on the relationship between VMT and health benefits of encouraging drivers to walk or bike instead of drive, the wear and rainwater runoff that occurs on roads and highways, and air pollutant emissions (including GHG) from avoided vehicle travel when VMT is reduced. The OPR also issued non-binding guidance documents relating to VMT and GHG.

Regional

2018 Regional Transportation Plan/Sustainable Communities Strategy

The Kern Council of Governments (Kern COG) is the Regional Transportation Planning Agency (RTPA) for the Kern County region. Kern COG adopted the 2018 RTP/SCS in August 2018. The 2018 RTP is a 24-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It has been developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between Federal, State, regional, and local agencies. Included in the 2018 RTP is the SCS required by California's Sustainable Communities and Climate

Protection Act, of SB 375. SB 375 provides for closer integration of the RTP/SCS with the Regional Housing Needs Allocation (RHNA) ensuring consistency between low-income housing need and transportation planning. SB 375 includes the following three primary findings related to the RTP/SCS development process:

- The CARB was required to develop regional GHG emission reduction targets for cars and light trucks for each of the 18 Metropolitan Planning Organizations (MPOs) in California, including Kern COG. The CARB approved targets for the San Joaquin Valley in January 2013. Although focused on the San Joaquin Valley, the RTP/SCS applies to all of Kern County. The target for Kern County is a per capita reduction in GHG emissions from passenger vehicle travel of 5% by 2020 and 10% by 2035 relative to 2005 levels.
- Kern COG was required to prepare an SCS that specifies how the GHG emission reduction target set by the CARB will be achieved. If the target cannot be met through the SCS, then an Alternative Planning Strategy (APS) shall be prepared by Kern COG. Chapter 4 of the 2018 RTP/SCS includes the SCS for Kern COG. The RTP/SCS for Kern County demonstrated reductions of 14.1% for 2020 and 16.6% for 2035.
- Streamlines CEQA requirements for specific residential and mixed-use developments that are consistent with the Kern COG SCS or APS (as determined by the CARB) to achieve regional GHG emissions reduction target (Kern COG 2018).

San Joaquin Valley Air Pollution Control District (SJVAPCD)

On December 17, 2009, the SJVAPCD's Governing Board adopted the first comprehensive regional policy and guidance on addressing and mitigating GHG emission impacts caused by industrial, commercial, and residential development in the San Joaquin Valley. This set of guidance documents is designed to assist local permitting agencies and businesses by answering several questions related to CEQA and how to address GHG impacts under existing CEQA law.

To assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific GHG emissions on global climate change, the SJVAPCD has adopted the guidance: *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* and the policy: *District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The following criteria was outlined in the document to determine whether a project could have a significant impact:

- Projects determined to be exempt from the requirements of CEQA would be determined to have a less than significant individual and cumulative impact for GHG emissions and would not require further environmental review, including analysis of project specific GHG emissions. Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement BPS.
- 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

- impact for GHG emissions. 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 BPS.
- Projects implementing Best Performance Standards would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
 - Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29 percent, compared to Business-as-Usual (BAU*), including GHG emission reductions achieved since the 2002-2004 baseline period. Projects achieving at least a 29 percent GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.
 - Notwithstanding any of the above provisions, projects requiring preparation of an Environmental Impact Report for any other reason would require quantification of project specific GHG emissions. Projects implementing BPS or achieving at least a 29 percent GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.

Local

Kern County

Kern County has not adopted a GHG reduction plan or climate action plan as of this publication of this EIR. Construction and operation of the project would be subject to policies and regulations contained within the Kern County General Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to GHG emissions. The policies and implementation measures in the Kern County General Plan related to GHG emissions that are applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference. The policies, goals, and implementation measures in the *Kern County General Plan* applicable to GHGs as related to the project are provided in **Chapter 4.3, Air Quality**. Some of the listed policies, goals, and implementation measures would indirectly impact GHG emissions through the reduction of fossil fuel use.

Kern County General Plan

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

1.10.2 – Air Quality

Policies

- **Policy 18:** The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be placed on minimizing air quality degradation in the desert to enable effective military operations and in the valley region to meet attainment goals.
- **Policy 19:** In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision making body, as part of its deliberations, will ensure that:
 - (a) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
 - (b) The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.
- **Policy 20.** The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District on ministerial permits.
- **Policy 21:** The County shall support air districts' efforts to reduce PM₁₀ and PM_{2.5} emissions.
- **Policy 22.** Kern County shall continue to work with the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District toward air quality attainment with federal, state, and local standards.
- **Policy 23.** The County shall continue to implement the local government control measures in coordination with the Kern Council of Governments and the San Joaquin Valley Unified Air Pollution Control District.

Implementation Measures

- **Measure F:** All discretionary permits shall be referred to the appropriate air district for review and comment.
- **Measure G:** Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:
 - (a) Minimizing idling time.
 - (b) Electrical overnight plug-ins.
- **Measure H:** Discretionary projects may use one or more of the following to reduce air quality effects:

- (a) Pave dirt roads within the development.
 - (b) Pave outside storage areas.
 - (c) Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
 - (d) Use of alternative fuel fleet vehicles or hybrid vehicles.
 - (e) Use of emission control devices on diesel equipment.
 - (f) Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces.
 - (g) Provide bicycle lockers and shower facilities on site.
 - (h) Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
 - (i) The use and development of park and ride facilities in outlying areas.
 - (j) Other strategies that may be recommended by the local Air Pollution Control Districts.
- **Measure J.** The County should include PM₁₀ control measures as conditions of approval for subdivision maps, site plans, and grading permits.

South Kern Industrial Center Specific Plan (SKICSP)

The proposed project is within the South Kern Industrial Center (SKIC). The SKIC consists of approximately 744 acres which are planned for in the SKIC Specific Plan (SKICSP). The SKICSP is located approximately 18 miles southwest of Bakersfield and approximately 7 miles east of Taft, in unincorporated Kern County. The composting Facility was approved by Kern County under Conditional Use Permit 2, Map 158 (Approved October 22, 2009; Resolution No. 2002-421) Existing CUP) on October 2002, along with a Supplemental Environmental Impact Report which was certified on the same date (collectively “Existing Entitlements”). Subsequent to the approvals, the Facility underwent construction and began operations in 2006. The project site is located within the SKICSP, which was most recently amended June 22, 2021 (SPA 159 Map 500). The purpose of the SKICSP is to be used as a planning tool to closely define the planning criteria of the specific plan area and to define the nature and extent of growth and to ensure orderly development. The SKICSP was designed to achieve three primary goals; implement the Kern County General Plan, establish of development standards, and guide the planned development of the SKIC.

Measures contained in the SKICSP related to greenhouse gas emissions include requiring dust developments are designed in accordance with local air quality programs and incorporate the standards established in the Kern County Air Maintenance Plan. In Kern County, specific plans, such as the SKICSP, are used to implement goals, objectives, and policies of the Kern County General Plan in a more detailed and refined manner unique to a smaller area of the County. Accordingly, the

applicable goals and policies, within the SKICSP, are consistent with those contained in the applicable policies, goals, and implementation measures of the Kern County General Plan. Applicable goals and policies related to hydrology and water quality are listed below:

Land Use Element

Implementation Measures

- **Implementation Measure 22:** Development shall be in accordance with standards of the local Air Quality Maintenance Program (AQMP) and when required shall be reviewed by San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) prior to the issuance of building permits.

Environmental Resource Management Element

Policies

- **Policy 6:** Incorporate standards established in the Kern County Air Maintenance Plan

Energy, Efficiency, and Conservation Projects

In 2009, the Kern County Board of Supervisors approved the proposed list of Energy, Efficiency, and Conservation projects for which the County will request funding under the provisions of the American Recovery and Reinvestment Act of 2009 (HR 1). The Kern County Planning and Natural Resources Department has requested an allocation for the preparation of a Climate Change Action Plan (CCAP) for the County General Plan. California's Climate Scoping Plan calls for local governments to reduce GHG emissions through the adoption of local programs as an important strategy to reduce community scale GHG emissions. A project's conformance with an adopted CCAP would ensure the goal of AB 32 can be attained.

Kern Sustainable Communities Strategy

The SCS is a part of the 2014 RTP developed by the Kern Council of Governments (COG). The SCS (Kern COG 2014) strives to reduce air emissions from passenger vehicle and light-duty truck travel by better coordinating transportation expenditures with forecasted development patterns and, if feasible, help meet CARB GHG targets for the region. The SCS does not regulate the use of land nor does it supersede the land use authority of the cities or county within the region.

4.8.4 Impacts and Mitigation Measures

This section describes the greenhouse gas emissions significance thresholds, the methodology used to evaluate whether the proposed project would exceed the thresholds, and an evaluation of the proposed project's impacts.

Methodology

The primary source of emissions (approximately 50 percent) from the proposed project is from mobile sources. There are a number of factors available for estimating the GHG from mobile sources. Not all GHGs exhibit the same ability to induce climate change; as a result, GHG contributions are commonly quantified in carbon dioxide equivalencies (CO₂e). The proposed project's operational

GHG emissions were estimated using the CalEEMod program (version 2016.3.2) for on-site mobile equipment, EMFAC2017 for on-road vehicles, Emission Estimation Methodology for Off-Highway Recreational Vehicles for on-site ATVs, California Climate Action Registry General Reporting Protocol Version 3.1 for electricity and water usage emissions and WARM (version 14) for composting emissions. Composting has GHG benefits including decreased soil erosion and decreased fertilizer usage which are taken into account by the WARM model when calculating GHG emissions.

Thresholds of Significance

The Kern County Environmental Checklist identifies the following criteria, as established in Appendix G of the State CEQA Guidelines, to determine if a project could potentially have a significant environmental impact from the emissions of GHGs. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact on GHG emissions if it would:

- a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or,
- b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Kern County has not developed a quantitative threshold of significance for GHG emissions, but a project found to contribute to a net decrease in GHG emissions and found to be consistent with the adopted implementation of the CARB Climate Change Scoping Plan is presumed to have less-than-significant GHG emission impacts (CARB 2014).

As indicated in **Section 4.8.3, Regulatory Setting**, the SJVAPCD has adopted guidance documents for assessing and mitigating GHG impacts on global climate change. Rather than establishing specific numeric thresholds of significance (as in the case of criteria pollutant emissions), the SJVAPCD guidance utilizes a tiered approach to assess cumulative impacts on global climate change. First, a project can demonstrate compliance with an approved GHG emissions reduction program (such as CARB's Statewide GHG Cap-and-Trade Program). Second, a project can demonstrate implementation of BPS to reduce GHG emissions. Finally, a project can demonstrate achievement of a 29% reduction in GHG emissions from BAU. This project relies on compliance with an approved GHG emission reduction program to determine whether the project would have a significant individual or cumulative impact for GHG emissions.

The SJVAPCD CEQA Cap-and-Trade Policy also recommends that projects that are required to comply with CARB's GHG Cap-and-Trade Program be determined to have a less than cumulatively significant impact on global climate change. This policy is included in the SJVAPCD's December 2009 CEQA GHG policies (described above) and its March 19, 2015 *Final Draft Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI), which states that a project whose emissions have been reduced or mitigated consistent with the California Global Warming Solutions Act of 2006 (AB 32) should be considered to have a less-than-significant impact on global climate change (SJVAPCD 2015).

This approach would include both the CARB's GHG Cap-and-Trade Program and other adopted GHG-reducing regulations (such as the oil and gas methane rule now in development) as adopted

GHG emissions reduction plans. Under the SJVAPCD's tiered approach in assessing significance of project-specific GHG emission increases, projects complying with an approved GHG emission reduction plan or GHG mitigation program that 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 impact for GHG emissions (SJVAPCD 2015).

The SJVAPCD's March 2015 GAMAQI, Section 8.9, observes that:

It is widely recognized that no single project could generate sufficient GHG emissions to noticeably change global climate temperature. However, the combination of GHG emissions from past, present and future projects could contribute substantially to global climate change. Thus, project specific GHG emissions should be evaluated in terms of whether or not they would result in a cumulatively significant impact on global climate change.

Project Impacts and Mitigation Measures

Impact 4.8-1: The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Neither the SJVAPCD nor any other federal, state, or local agency has adopted a threshold to measure a project's impact on global climate change. Global climate change is an international phenomenon, and the regulatory background and scientific data are changing rapidly. In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. AB 32 describes how global climate change would impact the environment in California. The impacts described in AB 32 include changing sea levels, changes in snow pack and availability of potable water, changes in storm flows and flood inundation zones, and other impacts.

The list of impacts included in AB 32 may be considered substantial evidence of environmental impacts requiring analysis in CEQA documents. AB 32 requires CARB, the State agency charged with regulating statewide air quality, to adopt rules and regulations that would achieve greenhouse gas emissions equivalent to statewide levels in 1990 by 2020. By July 1, 2007, CARB adopted a list of discrete early action GHG emission reduction measures that could be implemented by January 1, 2010.

As required by AB 32, CARB determined what the statewide GHG emissions level was in 1990 and approved a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. CARB approved the 2020 limit on December 6, 2007. CARB's GHG inventory has estimated 427 million MTCO₂e in California in 1990. In 2004, the emissions were estimated at 480 MMTCO₂e.

Project GHG Inventory

The proposed project's operational GHG emissions were estimated using the CalEEMod program (version 2016.3.2) for on-site mobile equipment, EMFAC2017 for on-road vehicles, Emission Estimation Methodology for Off-Highway Recreational Vehicles for on-site ATVs, California Climate Action Registry General Reporting Protocol Version 3.1 for electricity and water usage emissions and WARM (version 14) for composting emissions. Composting has GHG benefits

including decreased soil erosion and decreased fertilizer usage which are taken into account by the WARM model when calculating GHG emissions. These emissions are summarized in **Table 4.8-3, Estimated Annual Greenhouse Gas Emissions.**

Table 4.8-3: Estimated Annual Greenhouse Gas Emissions

Source	CO ₂ e
Mobile Incremental Emissions	-640.34
Stationary Source Emissions	-74,279.34
Energy Emissions	1,204
Water Usage Emissions	5.73
Project Emissions	-73,709.84

Source: Insight Environmental Consultants, 2020.

The project would not result in the emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), or sulfur hexafluoride (SF₆), the other gases identified as GHG in AB 32. The proposed project would be subject to any regulations developed under AB 32 as determined by CARB. In order for the project to be considered less than significant, it would need to conform to the goals of AB 32. The proposed project would have an overall net decrease in incremental GHG emissions due to the benefits of composting including decreased soil erosion and decreased fertilizer usage. Therefore, the GHG incremental emissions associated with the project would have a less than significant individual and cumulative impact on global climate change.

Feasible and Reasonable Mitigation

CEQA requires that all feasible and reasonable mitigation be applied to the project to reduce the impacts from construction and operations on air quality. The SJVAPCD's "Non-Residential On-Site Mitigation Checklist" was utilized in preparing the mitigation measures and evaluating the projects features. These measures include using controls that limit the exhaust from construction equipment and using alternatives to diesel when possible. Additional reductions would be achieved through the regulatory process of the air district and CARB as required changes to diesel engines are implemented, which would affect the product delivery trucks and limits on idling.

While it is not possible to determine whether a project individually would have a significant impact on global warming or climate change, a project would potentially contribute to cumulative GHG emissions in California as well as to related health effects. A project's emissions would only be a very small fraction of the statewide GHG emissions. However, without the necessary science and analytical tools, it is not possible to assess, with certainty, whether the project's contribution would be cumulatively considerable, within the meaning of CEQA Guidelines Sections 15065(a)(3) and 15130. CEQA, however, does note that the more severe environmental problems, the lower the thresholds for treating a project's contribution to cumulative impacts as significant. Given the position of the legislature in AB 32, which states that global warming poses serious detrimental effects, and the requirements of CEQA for the lead agency to determine that a project not have a cumulatively considerable contribution, the effect of the project's CO₂ contribution may be considered cumulatively considerable. This determination is speculative, given the lack of clear scientific evidence or other criteria for determining the significance of the project's contribution of GHG to the air quality in the SJVAB.

The strategies currently being implemented by CARB may help in reducing the project's GHG emissions and are summarized in **Table 4.8-4**, *Select CARB GHG Emission Reduction Strategies*, below.

Table 4.8-4: *Select CARB GHG Emission Reduction Strategies*

Strategy	Description of Strategy
Vehicle Climate Change Standards	AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by CARB in Sept. 2004.
Diesel Anti-Idling	In July 2004, CARB adopted a measure to limit diesel-fueled retail motor vehicle idling. These requirements are specified in Title 13, California Code of Regulations §2449(d)(2).
Other Light-Duty Vehicle Technology	New standards would be adopted to phase in beginning in the 2017 model year.
Alternative Fuels: Biodiesel Blends	CARB would develop regulations to require the use of 1% to 4% Biodiesel displacement of California diesel fuel.
Alternative Fuels: Ethanol	Increased use of ethanol fuel.
Heavy-Duty Vehicle Emission Reduction Measures	Increased efficiency in the design of heavy-duty vehicles and an educational program for the heavy-duty vehicle sector.

Source: Insight Environmental Consultants, 2020.

Not all of these measures are currently appropriate or applicable to the proposed project. While future legislation could further reduce the project's GHG footprint, the analysis of this is speculative and in accordance with CEQA Guidelines Section 15145, is not further evaluated in this analysis.

CEQA Guidelines Section 15130 notes that sometimes the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis. Global climate change is this type of issue. The causes and effects may not be just regional or statewide, they may also be worldwide. Given the uncertainties in identifying, let alone quantifying the impact of any single project on global warming and climate change, and the efforts made to reduce emissions of GHGs from the project through design, in accordance with CEQA Section 15130, any further feasible emissions reductions would be accomplished through CARB regulations adopted pursuant to AB 32. The proposed project would have an overall net decrease in incremental GHG emissions due to the benefits of composting including decreased soil erosion and decreased fertilizer usage. Therefore, the GHG incremental emissions associated with the proposed project would have a less than significant individual and cumulative impact on global climate change.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Impact 4.8-2: The project would conflict with an Applicable Plan, Policy or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases.

At the time of this writing, the County of Kern does not have an adopted GHG Climate Action Plan. Implementation of the proposed project would result in a net decrease in incremental GHG emissions due to the benefits of composting including decreased soil erosion and decreased fertilizer usage. As discussed in **Section 3.3, *Project Objectives***, the project would allow for the continued operation of a state-of-the-art regional composting facility to meet the organic waste diversion requirements enacted by recent California legislation (AB 32, AB 1826, SB 1383, etc.) and to reduce volatile organic compound and greenhouse gas emissions through the diversion of organic material that would otherwise be disposed of in a landfill.

In accordance with SJVAPCD's CEQA thresholds for the evaluation of GHG impacts, a project would not have a significant GHG impact if it is consistent with an applicable GHG reduction plan. Applicable GHG reduction plans include Kern COG's *2018 RTP/SCS*, which was approved by the CARB in August 2018, and the CARB's *2017 Climate Change Scoping Plan*. Consistency with these plans is discussed in greater detail as follows:

2018 Regional Transportation Plan/Sustainable Communities Strategy

The RTP is based on an analysis that considers the entire County, and includes all projects involving changes in regional growth and land use in Kern County, as well as the countywide vehicle traffic projections. Cumulative GHG emissions analyzed in the RTP were compared to regional GHG thresholds and analyzed under statewide plans and regulations. This analysis concluded that the projected increase in GHG emissions from existing conditions to 2040 would primarily be due to changes in regional growth/land use; however, the RTP achieves GHG emissions reduction targets from mobile sources from 2005 levels by implementing a mix of land use strategies, transportation management, economic factors, and road projects. The project, which would allow for modifications to a composting facility, is consistent with the land use and transportation management strategies and assumptions set forth in the RTP.

Climate Change Scoping Plan

The *2017 Climate Change Scoping Plan* describes the strategies California will take to reduce GHGs to achieve the goal of reducing emissions to 40% below 1990 levels by 2030. These strategies are grouped into 14 categories and target key sectors of the economy, including energy, transportation, industry, water, waste management, and natural, working, and agricultural lands. Many of the strategies identified in the scoping plan are more programmatic and are not applicable to individual development projects. However, the scoping plan includes several strategies that aim to reduce GHG emissions that are relevant to the project. These strategies involve renewable energy generation, diversion of organic waste from landfill facilities, utilizing biomass for renewable energy and fuel, and controlling methane at landfill facilities.

The proposed project includes modifications to an existing landfill facility, which would not change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre compost facility permitted under the existing CUP. The project

would result in a net deduction of GHG emissions and would contribute towards the State's RPS and GHG reduction goals.

The proposed project would not conflict with either the *2018 RTP/SCS* or the *2017 Climate Change Scoping Plan*. Therefore, the proposed project would result in a less-than-significant impact related to a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts and Mitigation Measures

The proposed project would have less than significant cumulative impacts related to cumulative GHG emissions. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. Kern County and the SJVAB currently do not have GHG inventories. On December 6, 2007, the CARB established a GHG emissions limit based on the 1990 level for the year 2020 and adopted regulations requiring mandatory reporting of GHGs for large facilities. After a year of investigation, CARB has established that the state's 1990 emissions are 427 million MTCO_{2e}. Preliminary estimates indicate that 2020 emission projections could be 600 million MTCO_{2e} if no actions are taken to reduce GHGs ("business as usual" scenario). CARB determined that California must prevent 173 million tons of CO_{2e} from being emitted by 2020 in order to meet the 1990 level as required by AB 32.

Without the necessary science and analytical tools, it is not possible to assess, with certainty, whether the proposed project's contribution would be cumulatively considerable within the meaning of State CEQA Guidelines Sections 15065(a)(3) and 15130. However, while it is not possible to determine whether the proposed project individually would have a significant impact on global warming or climate change, the proposed project would have an overall net decrease in incremental GHG emissions due to the benefits of composting including decreased soil erosion and decreased fertilizer usage. Therefore, the project would have a less than significant cumulative impact on global climate change.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Section 4.9

Hazards and Hazardous Materials

4.9.1 Introduction

This Draft Environmental Impact Report (EIR) section describes the affected environment and regulatory setting related to hazards and hazardous materials. It also describes the impacts of hazards and hazardous materials that would result from implementation of the Synagro South Kern Compost Manufacturing Facility Project (proposed project). The proposed project would modify CUP No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) for the existing Synagro South Kern Compost Manufacturing Facility. The regulatory setting applicable hazards and hazardous materials is presented in **Section 4.9.3, *Regulatory Setting***, while the project impacts and associated mitigation measures are analyzed in **Section 4.9.4, *Impacts and Mitigation Measures***.

Issues related to human health other than those related to wildfires, hazardous materials and waste, and airports have been analyzed elsewhere in this document including **Section 4.3, *Air Quality***, **Section 4.7, *Geology and Soils***, **Section 4.10, *Hydrology and Water Quality***, and **Section 4.12, *Noise***, and are not repeated in this section.

4.9.2 Environmental Setting

Existing Setting

Land uses immediately surrounding the project site include solar installations to the west, south and east. A petroleum oil refinery with three tanks and petroleum piping is located to the north across Santiago Road. Relative to the approximate 744-acre South Kern Industrial Center Specific Plan (SKICSP) boundary, the solar installation encompasses approximately 216 acres and the petroleum oil refinery occupies a total site footprint of approximately 80 acres. Northwest of the project site, along South Lake Road is a railroad spur that ends approximately 1 mile southwest of the project. The railroad extends to the north where it serves a second petroleum facility approximately one mile to the north. Other uses surrounding the project site include, Hughes Rocket Booster Testing Facility, Baker Petrolite Chemical Plant, a car cleaning facility, and Boswell Cotton Gin, approximately 1 mile to the north of the project site just outside the SKICSP.

The remainder of the surrounding areas contain sparse development with the vast majority of land being vacant or under agricultural production. The agricultural uses consist predominantly of cotton and alfalfa to the north and irrigated row crops to the south. Serving the agricultural needs, as well as water needs of communities and cities to the south, is the California Aqueduct, approximately 3.5 miles to the south.

The lands immediately adjacent to the project site are characteristic of somewhat industrial development and the areas further out are characteristic of agricultural lands with row crops and circular fields. Similar to the project site, these areas are flat and lack vegetation or significant landforms.

The nearest residence to the project site is approximately 1.5 miles to the north of the project site and one mobile home residence permitted for the caretaker/operator of a catfish farm is located within a two-mile radius of the site. The unincorporated communities of Taft Heights and Ford City, located adjacent to the south and north of the City of Taft, are located approximately 12 miles to the west. The unincorporated communities of Dustin Acres and Valley Acres are located approximately 10 miles northwest of the project site along State Route (SR) 119.

Existing zoning does not allow for the establishment of a residential land uses in the zones surrounding the existing Facility and the nearest home is approximately 1.5 miles north of the site. The nearest school to the project site is Lakeside School (K-8), located approximately 9.5 miles northeast of the project site in unincorporated Kern County. The Kern County Fire Department (KCFD) would continue to provide fire protection services to the proposed project site. The project site would most likely be served by KCFD Fire Station No. 21, the Taft Substation, located at 303 North 10th Street, in Taft, approximately 12 miles west of the project site. The project would be served by the Kern County Sherriff's Office (KCSO) for law enforcement and public safety; the closest KCSO Substation is the Taft Substation, located approximately 13 miles west of the project site at 315 N Lincoln Street in the City of Taft.

Project Site

The 100-acre project site is located in the Valley Region in the western portion of unincorporated Kern County, California, and is outside the sphere of influence (SOI) of any cities. The project site is approximately 27 miles east of the San Luis Obispo County line and approximately 34 miles north of the Ventura County line. It is approximately 10 miles southeast of the unincorporated communities of Dustin Acres and Valley Acres and 12 miles east of the unincorporated communities of Taft Heights and Ford City.

The project site is relatively flat with elevation ranges from approximately 313 feet above mean sea level (amsl) to approximately 347 feet amsl and is located within the U.S. Geological Survey (USGS) 7.5-minute series, Taft, California, topographic quadrangle. The site is nearly level, sloping downward, northwesterly at a grade of about 0.5 percent.

Existing uses on the project site include a composting facility, which currently operates on a 44-acre portion of the site. The remaining approximate 56 acres consist of undeveloped land historically used for agricultural production in an area that is routinely disked, once or twice a year.

The existing Compost Facility includes a perimeter fence with a gated entrance, scales, internal access roads, maintenance area including onsite truck wash area, administration building space, receiving building/ mixing equipment area, compost additive temporary storage area, and finished product area. Traffic control is maintained to ensure that vehicle traffic into, on, and out of the site minimizes interference and safety issues for individuals and for traffic on Santiago Road and nearby public roads.

The existing Compost Facility is permitted to receive and process a total of 670,000 wet tons of material per year (wtpy), currently comprised of up to 400,000 wtpy of biosolids and pre-consumer food waste and up to 270,000 wtpy of wood chips and agricultural waste products (i.e., pistachio and almond hulls, cotton gin waste, stable bedding, and screened green waste). The proposed modifications to the CUP would not change the total wet tons the Compost Facility is permitted to receive; however, the wet tons of compostable materials and ratio of bulking agent would change.

It should be noted that the total amount of biosolids the facility can receive would not exceed the 400,000 wet tons as permitted under the existing CUP.

Current feedstock types permitted for acceptance at the Compost Facility include biosolids, pre-consumer food waste, and bulking agents' green material (feedstocks). Materials are off-loaded at the Facility. Bulking agents also are used and stored in the amendment storage area before being mixed for processing using a covered aerated static pile composting system (CASP) system which uses piles to compost the mixture of biosolids, pre-consumer food waste and bulking agents. Composting lasts approximately 20 days. The CASP system uses air that is drawn or pushed through the pile using low pressure-high volume blowers and a piping system. Materials are transported within the site via interior haul roads.

The amendment to the CUP would authorize the Facility to accept additional types of "mixed materials" and organic wastes consistent with Assembly Bill 1826 and Senate Bill 1383, which have changed the requirements for disposal of organic waste as well as expanding the list of organic wastes that can be accepted at a Compostable Materials Handling Facility. Acceptance of additional material types would require the site to install new equipment to receive and process the new material types. None of the new equipment is considered hazardous or requires the use of substantial volumes of hazardous materials to operate. The additional types of "mixed materials" and organic wastes would include all types of food material (including post-consumer food waste, food-soiled paper, compostable plastics), and digestate consistent with current regulations. No hazardous materials can be received at the Facility and these new regulations do not allow the receipt or composting of hazardous materials. Only non-hazardous materials are or will be allowed at the Facility.

To enable processing of the expanded feedstock as required by the regulations, the existing area used for composting operations may be expanded into the undeveloped, approximately 56 acres, permitted by the existing CUP. The modification to the CUP, however, would not change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre compost facility permitted under the existing CUP.

Temperature control of the composting piles is achieved by daily measurements, a feedback control system, or by varying the time period of aeration. Once the proper temperature and pathogen and vector attraction reduction times are reached pursuant to 40 CFR part 503 requirements, the primary composting process is deemed complete.

The final compost product is marketed to agricultural producers and is currently permitted to be stored onsite for 7 days. In order to accommodate the seasonal fluctuations in the compost market and crop rotation, the amendment to the CUP would allow finished compost to be stored onsite for up to 180 days, as allowed by the Waste Discharge Requirements (WDRs) issued by the Central Valley RWQCB as Order No. R5-2005-0077 which was adopted in June 2005.

Record Review

The Waterboards Geotracker website for records of sites and facilities related to hazardous materials was resourced. Based on the mapping of the project site and surrounding area, there are no incidents of spills or hazardous materials incidents with less than 1.0 miles.

The project site is listed on the database as a Land Disposals Site, which is consistent with its current use. The South Kern Industrial Center, which includes the existing Compost Facility, was issued

Order No. R5-2005-0077, Waste Discharge Requirements (WDRs) by the Central Valley Regional Water Quality Control Board on June 24, 2005. This included a Monitoring and Reporting Program for the Facility which was revised on February 4, 2011.

Violations and Compliance Inspections

The Facility has been regularly inspected by the Water Board for compliance with the WDRs. Since the start of operations, the Facility has received two notices of violation by the Water Board, each of which were immediately corrected, and no further enforcement action was required by the Water Board. At this time, there are no violations of Waste Discharge Requirements Order No. R5-2005-0077 (Water Boards, 2016, 2017, 2018).

Hazardous Materials and Waste

A hazardous material is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health and the environment. Under Title 22 of the California Code of Regulations (CCR), the term “hazardous substance” refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: (1) toxicity; (2) ignitability; (3) corrosiveness; and, (4) reactivity (CCR Title 22, Chapter 11, and Article 3). A hazardous material is defined in CCR, Title 22 as:

...A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed (CCR, Title 22, Section 66260.10).

Hazardous materials in various forms can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazards to human health and the environment can occur during production, storage, transportation, use, or disposal of hazardous materials.

The project site has existing operations that include the use of gasoline, diesel fuel, oils, lubricants, solvents, detergents, degreasers, needed to operate machinery and conduct repairs of existing facilities, infrastructure, and equipment. The Synagro Composting Facility operates under an existing Hazardous Materials Business Plan (HMBP) on-file with the Kern County Environmental Health Services Division/Hazardous Materials Section. The HMBP includes a complete list of all materials used onsite and information regarding how the materials are transported and in what form they would be used. This information has been recorded to maintain safety and prevent possible environmental contamination or worker exposure. If operation of the new processing and grinding equipment includes the use of materials or requires potentially hazardous maintenance protocols not already identified in the HMBP, it would be updated and filed with the County.

Transportation of Hazardous Materials

Hazardous materials can be shipped to, throughout, or from Kern County via truck, rail, and pipeline. Individual companies or operators use different suppliers or services companies that could produce materials locally or transport them from wholesalers throughout the country or world.

The transportation of hazardous materials within the State of California is subject to various federal, State, and local regulations. It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery or the loading of such materials (California Vehicle Code Sections 31602[b] and 32104[a]). The California Highway Patrol (CHP) designates through routes to be used for the transportation of hazardous materials. Transportation of hazardous materials is restricted to these routes, except in cases where travel branching from these routes is required to deliver or receive hazardous materials. The Kern County General Plan shows the nearest hazardous materials shipping routes to the project site as the following: State Highway (SH) 166 (approximately 5 miles south of the project site); SH-33 (approximately 11 miles west of the project site), and Interstate (I) 5 (approximately 7 miles northwest, of the project site). Information on CHP requirements and regulatory authority is provided in **Section 4.9.3, Regulatory Setting**, below.

Air Traffic and Military Aviation

The project site is not located within the SOI of any airport as identified by the Kern County Airport Land Use Compatibility Plan (ALUCP). The Kern County ALUCP identifies eight airports within the Valley Region area.

The Taft-Kern County Airport is the nearest public airstrip and is located in the Mountain Region area, approximately ten miles west of the project site. The Taft-Kern County Airport is privately owned by Standard Oil Company. The airstrip has Runway 7-25 in fair condition and one-single engine airplane operated from this airstrip. The airstrip averaged 27 aircraft per day for a 12-month period ending in February 2018 (AirNav, 2018).

The nearest private airports are Skydive San Joaquin located approximately 10 miles to the southeast and Paradise Lakes Estates and Airport Park community, located approximately 17 miles east of the project site; both are privately owned. Skydive San Joaquin has one east and west trending runway and Paradise Lakes Estates and Airport Park has one north to south trending runway (AirNav, 2019).

Airport Facilities

Commercial air travel in the area is provided by Meadows Field Airport, which is owned by Kern County and is one of seven airports operated by the Department of Airports. This airport is located approximately seven (7) miles north of downtown Bakersfield.

The Bakersfield Municipal Airport, owned by the City of Bakersfield, is approximately 200 acres in size with two runways and is located approximately 19 miles northeast of the project site. It is a corporate airport that is home to over 100 general aviation aircraft and primarily serves general aviation small aircraft for destinations in southern California.

Because 10 miles exist between the closest airport, the Taft-Kern County Airport, and the proposed project site, neither construction nor completion of the proposed project is expected to have any effect on air traffic patterns. Thus, air traffic patterns are not further addressed in the impact analysis for this proposed project.

Fire Hazard Areas

Fire Hazard Severity Zones (FHSZs) are areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors that have been mapped by the California Department of Forestry and Fire Protection (CAL FIRE) under the direction of (Public Resources Code [PRC] 4201-4204 and Government Code 51175-89). FHSZs are ranked from moderate to very high and are categorized fire protection as within a Federal Responsibility Area (FRA) under the jurisdiction of a federal agency, within a State Responsibility Area (SRA) under the jurisdiction of CAL FIRE, or within a Local Responsibility Area (LRA) under the jurisdiction of a local agency. The County contains areas with “Moderate,” “High,” and “Very High” fire threat ratings, and the majority of the County outside of the Valley Region lies within an SRA. CAL FIRE implements wildfire planning and protection for the SRA (CAL FIRE, 2007). CAL FIRE determined that Kern County has no “Very High” FHSZs in LRA, therefore Kern County does not have a final LRA map of FHSZs (CAL FIRE, 2008). Unzoned LRAs present low risk for wildfire ignitions and fire spread and are provided protection by the Kern County Fire Department (KCFD). The Valley Region is unzoned because it has less fuel and is under KCFD jurisdiction. The proposed project is located in this unzoned portion of the County and is not listed in any Moderate, High, or Very High Fire Hazard Severity Zone (CAL FIRE, 2007)

Surface Fires

Surface fires are typically caused by human or external situations; however, spontaneous combustion can occur if heat from both biological oxidation and chemical oxidation is not controlled within compost piles. The project is required to comply with applicable Specific Plan implementation measures as discussed in **Section 4.9.3, Regulatory Setting**, below. Implementation measures to reduce the risk of surface fires include compliance with all applicable code and ordinances for construction, access, water mains, fire flows, and fire hydrants; demonstration of the availability of adequate fire protection and suppression facilities; appropriate installation of fire hydrants and water storage tanks; equipping structures with fire sprinklers (if required by the Fire Marshall); proper installation of fire hydrants, hose cabinets, and hand-held CO₂ extinguishers; and employee training specific to firefighting techniques and the use of fire suppression equipment.

Oil and Gas

The primary mineral resource currently under development in Kern County is oil. Kern County is within the Inland District of the California Department of Conservation, Geologic Energy Management Division (CalGEM). The oil and gas industry is located throughout the county and specifically in the western portion of the County in the Valley Region and the western Mountain Region. According the CalGEM well finder GIS mapping there are no wells for either oil or gas within the project site (CalGEM 2020).

To the north of the project site across Santiago Road is a petroleum oil refinery with three tanks, two large tanks and one small tank, and petroleum piping. The site is connected to railroad spurs that are adjacent to four rows of piping used to conduct petroleum products into railroad cars. This site occupies a total site footprint of approximately 80 acres.

Oil Wells

Abandoned oil wells are present in some areas of the County as some areas have gone out of production. Former sumps, tank settings, buried flow lines, and other facilities associated with the abandoned wells may be uncovered during future site grading. There are no oil wells on or in immediate proximity to the site (CalGEM, 2020).

Crude oil is not considered a hazardous material by federal and State agencies; however, constituents of crude oil are recognized as potentially hazardous and toxic. Soils contaminated with crude oil may be encountered during grading.

Pipelines

Due to the presence of oil and gas fields within the County, a large number of underground pipelines cross throughout the County. These lines transport gas, crude oil, and oil. There is a potential for leakage, ruptures, explosions, and fires to occur along existing oil and natural gas lines that traverse the County. According to the Southern California Gas Company gas transmission pipeline interactive map, there is one transmission line and one high pressure distribution gas line in proximity to the project site. The transmission line is located approximately 0.3 miles north of the project site. From this point, the transmission line extends northeasterly along South Lake Road and westerly across undeveloped parcels. The high-pressure distribution line is located approximately 1.0 miles north of the project site and is located within the South Lake road right-of-way (SoCalGas, 2020).

Disease Vectors

A disease vector is an insect or animal that carries a disease-producing micro-organism from one host to another. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) defines the term vector as:

...any organism capable of transmitting the causative agent of human disease or capable of producing human discomfort or injury, including mosquitoes, flies, fleas, cockroaches, or other insects and ticks, mites or rats.

The accumulation of organic wastes would act as attractors for various vectors. In addition, any depressed areas, ponds, or drainage channels would provide areas for the breeding of mosquitoes.

Mosquitoes

Mosquitoes are of particular concern because of their abundance and distribution. In Kern County, mosquitoes are most abundant and active between May and October. Mosquitoes require standing water to breed and can be prolific in areas with standing water, such as wetlands.

Adult female mosquitoes can deposit eggs in a variety of aquatic habitats and other sources that contain water. The immature stages of each mosquito species develop in particular habitats. In general, there are four mosquito habitat groups: agricultural, industrial, domestic, and natural sources.

Typical sites within these habitat groups include:

- Agricultural Sources: irrigated pastures, dairies, and orchards.

- Industrial Sources: sewage treatment ponds, flood plains, drain ditches.
- Domestic Sources: containers, debris in and around ponds, bird baths, pet watering dishes, animal troughs, septic tanks, catch basins, roadside ditches, leaky sprinkler systems, stagnant swimming pools.
- Natural Sources: wetlands, rain pools.

All species of mosquitoes require standing water to complete their growth cycle. Therefore, any standing body of water represents a potential mosquito breeding habitat. Although mosquitoes will typically stay close to suitable breeding habitat and blood-meal hosts, they are known to travel up to 10 miles under breezy conditions. The breeding period for mosquitoes depends on temperature but generally occurs in March through October.

Water quality also affects mosquito reproduction. Generally, poor-quality water (e.g., water with limited circulation, high temperature, and high organic content) produces greater numbers of mosquitoes than high-quality water (e.g., water with high circulation, low temperature, and low organic content). Typically, water bodies with water levels that slowly increase or recede produce greater numbers of mosquitoes than water bodies with water levels that are stable or that rapidly fluctuate. In Kern County, the Kern Mosquito and Vector Control District is responsible for vector control.

Mosquito Hazards

Mosquito Species of Concern

In Kern County, two species of mosquito are primary targets for suppression. These two species, *Culex pipiens quinquefasciatus* and *Culex tarsalis*, are potential vectors of encephalitis and West Nile Virus. Other species of mosquitoes exist in Kern County that can cause a substantial nuisance in surrounding communities, but the *Culex* mosquito is the primary vector species of concern.

Although the West Nile Virus can be transmitted by a number of mosquito species, *Culex* is the most common carrier. This disease is thought to be a seasonal epidemic that flares up in the summer and fall. West Nile Virus is spread when mosquitoes that feed on infected birds then bite humans and other animals.

The encephalitis mosquito (*Culex tarsalis*) breeds in almost any freshwater pond. Birds appear to be the primary blood-meal hosts of this species, but the insect will also feed on domestic animals and humans. This species is the primary carrier in California of western equine encephalitis, St. Louis encephalitis, and California encephalitis, and is considered a significant disease vector of concern in the State.

The house mosquito (*Culex pipiens quinquefasciatus*) usually breeds in waters with a high organic material content. This species is often identified by its characteristic buzzing. Although its primary blood-meal host is birds, the house mosquito may also seek out humans. The house mosquito is a vector of St. Louis encephalitis.

Mosquito Borne Diseases

Mosquitoes are known to be the carriers of many serious diseases. The mosquito genus *Anopheles* carries the parasite that causes malaria, which is the leading cause of premature mortality worldwide. Encephalitis-type diseases are also transmitted through mosquitoes, including Eastern equine encephalitis (EEE) and Western equine encephalitis (WEE), which occur in the United States where they cause disease in humans, horses, and some bird species. Both EEE and WEE are regarded as two of the most serious mosquito-borne diseases in the United States due to their high mortality rates. It is not known how long West Nile Virus has been in the U.S., but Centers for Disease Control and Prevention (CDC) scientists believe the virus has been in the eastern U.S. since the early summer of 1999, and possibly longer (UCSF Health, 2016). In 2014 a yellow fever mosquito (*Aedes aegypti*) was detected in Kern County; this mosquito is a known carrier of diseases such as dengue, yellow fever, and chikungunya.

West Nile virus is the most important mosquito-borne disease affecting Kern County. As of October 15, 2019, a total of 43 states and the District of Columbia had reported West Nile virus infections, with a total of 731 human West Nile virus infections in California and 37 deaths (CDC, 2019). As of the same date, California had a total of 145 cases [(88 neuroinvasive disease cases) and (non-neuroinvasive disease cases)] and 4 deaths. The State of California West Nile virus website reports that of the infection cases, approximately 15 were in Kern County (Westnile, 2019).

In September 2002, the Kern County Public Health Services Department formed a West Nile Virus Task Force and has subsequently released reports documenting cases, developed strategies to prevent the occurrence of West Nile virus, and generated public education information such as information pamphlets. Statewide, there are 52 local agencies, including local Mosquito Abatement Districts and the California Department of Health Services Arbovirus Field Testing Stations, that work cooperatively to routinely conduct surveillance and control of mosquitoes and the diseases they transmit throughout California.

Yellow fever virus is related to West Nile virus and is transmitted to humans primarily through the bite of infected mosquitoes. Symptoms typically develop within three to six days and include fever, chills, severe headache, back ache, general body aches, nausea, vomiting, and fatigue (CDC, 2019a). Dengue emerged as a worldwide project in the 1950s and rarely occurs within the continental United States. The principal symptoms of dengue fever are high fever, severe headache, severe pain behind the eyes, joint pain, muscle and bone pain, rash, and mild bleeding (e.g., nose or gums bleed, easy bruising) (CDC, 2019b). Chikungunya was identified in the Americas on islands in the Caribbean in 2013 and beginning in 2014, cases in the United States were identified in travelers returning from the Caribbean. Symptoms may include headache, muscle pain, joint swelling, or rash; chikungunya does not often result in death, but symptoms can be severe and disabling (CDC 2019c). Between 2016 and 2019 there were three reported cases of County residents diagnosed with dengue. All three cases occurred in 2018 and were associated with travel outside the county (CDPH, 2018). Between 2016 and 2019 there were no County residents diagnosed with chikungunya (CDPH, 2018). According to the California Department of Public Health, to date, no known cases of these three viruses have originated within Kern County (CDPH, 2018).

Flies

Nuisance flies have a life cycle comprised of an egg stage, three larval stages, a pupal stage, and an adult stage. Eggs are laid by a mature female fly onto a substrate appropriate for larval development. A single female can lay hundreds of eggs during her life. Nuisance fly larvae (grubs) are generally white in color and are blunt ended. They develop in wet substrates, especially dung pats and manure and wet or rotting feed, hay, and bedding straw, where they feed on food particles found on the substrate. Fly larvae are not capable of developing in truly aqueous habitats; they need wet, but not overly wet, substrates.

Within the confines of a pupal case, the developing fly will undergo further changes to become a winged adult fly that will eventually emerge from the pupal case and disperse from the site. The length of time required to complete the development from egg to adult is temperature dependent and may be as short as seven days during the summer months in California.

Some nuisance flies are blood feeders and can inflict a painful bite while feeding on animals or humans. Blood feeding (or biting) flies include the stable fly and horn fly. Other flies do not bite (non-biting flies), instead feeding on body secretions or liquefied organic matter. Non-biting flies include the house fly, face fly, and garbage fly.

Adult flies are generally active during daylight hours and inactive at night. Nuisance flies are known to disperse from their development sites into surrounding areas; however, the distance and direction of dispersal are not well understood. Non-biting nuisance fly species are likely to disperse further than those fly species that require animal blood meals. The habitat surrounding a breeding site will play a role in the distance of nuisance fly dispersal. Nuisance flies will likely disperse further in open habitats typical of rangeland and low agricultural crops than they will in urban or forested/orchard areas that contain substantially more vertical structure on which flies may rest and that provide shade and higher humidity on hot summer days.

Most nuisance flies are not known to disperse great distances. Studies using marked house flies show that 60 percent to 80 percent of house flies were captured within one mile of their release point; 85 percent to 95 percent were caught within two miles of the release site within the first four days after they were turned loose. A few flies have been shown to travel further, but in general, fly control efforts for a community problem are focused within one mile of the source.

Rodents

The accumulation of organic waste presents the potential for significant populations of mice and rats. Rodents can spread or accelerate the spread of disease from contaminated areas to uncontaminated areas via their droppings, feet, fur, urine, saliva, or blood. In addition, mice provide a food source that could attract wild predatory animals (e.g., skunks, foxes, coyotes, and stray dogs), which could pose other disease problems.

Mice are generally nocturnal and secretive animals with keen senses of taste, hearing, smell, and touch. They are small enough to enter any opening larger than one quarter of an inch. Mice prefer cereal grains, if available, but will eat garbage, insects, meat, and even manure. Mice reproduce at high rates, making early control important in minimizing the potential for infestation. Although the life span of a mouse is only nine to twelve months, a female mouse can have five to ten litters per

year with five or six young in each litter. Mice do not consume large quantities of food but can cause significant economic damage due to physical structure damage and site contamination.

Rodent Borne Diseases

Hantavirus pulmonary syndrome (or simply Hantavirus) is an infectious respiratory disease endemic to North and South America. The virus is carried by wild rodents, especially deer mice. The virus produces two clinical signs in the deer mice, but can produce deadly infection in humans. Over 50 percent of human cases have been fatal. The rodents carrying the disease shed the virus in their urine, feces, and saliva. Humans become infected with the hantavirus when they inhale dust that has been contaminated with rodent urine. Most individuals who have become infected have lived or worked in areas that were heavily contaminated with rodent droppings. If a human being becomes infected, signs of illness usually appear about two weeks after exposure, although the time can range from a few days to as long as six weeks. The first signs are fever, headache, and pain in the abdomen, joints, and back. Afterwards, the patient's lungs begin to fill with fluid and breathing becomes extremely difficult. A high proportion of the patients die, but early treatment offers the best chance of survival.

Two cases of hantavirus were reported in California in 2015 with the most recent case being reported in 2017. All cases occurred in Mono County (CDPH, 2017a). Of the 69 reported cases in California residents between February 1980 and December 2014, four cases were confirmed to originate in Kern County (CDPH, 2017b).

Fleas

The California ground squirrel and its fleas are the most common source of plague in the Pacific states. Domestic cats (and sometimes dogs) can be infected by fleas or from eating infected wild rodents. Cats may serve as a source of infection to persons exposed to them. In addition, pets may bring plague-infected fleas into the home.

Bubonic plague is an infectious disease of animals and humans caused by the *Yersinia pestis* bacterium. People usually get plague from being bitten by a flea from a rodent that is carrying the plague bacterium or by handling an infected animal. Millions of people in Europe died from plague in the Middle Ages when human homes and places of work were inhabited by flea-infested rats. Today, modern antibiotics are effective against plague, but if an infected person is not treated promptly, the disease is likely to cause illness or death. Human plague in the United States since the last urban outbreak in the 1920s has occurred as mostly scattered cases in rural and semi-rural areas, with an average of seven human cases each year.

Onset of plague is usually two to six days after a person is exposed. Initial symptoms include fever, headache, and general illness, followed by the development of painful, swollen regional lymph nodes. The disease progresses rapidly and the bacteria can invade the bloodstream, producing severe illness, called plague septicemia.

Once a human is infected, a progressive and potentially fatal illness generally results unless specific antibiotic therapy is given. Progression leads to blood infection and, finally, to lung infection. The infection of the lung is termed plague pneumonia and it can be transmitted to others through the expulsion of infective respiratory droplets by coughing.

The plague is endemic to California, mainly occurring in the mountains and foothills surrounding the California Central Valley (CDC, 2016b). The last urban plague epidemic in the United States occurred in Los Angeles between 1924 and 1925. There were two cases of the plague in humans in 2015, both of which occurred in patients that had visited or camped in Yosemite National Park prior to the onset of the disease (CDPH, 2019a).

Incidences of the plague in Kern County are extremely rare, however, since it is endemic to the area, due to extensive areas of natural lands where there could be animals with fleas that could provide a source of the plague, there is the potential for the plague to occur within the County.

Ticks

Lyme disease is a potentially debilitating and sometimes chronic infection transmitted to humans and other animals by certain ticks. The disease is caused by a spirochete (*Borrelia burgdorferi*) a corkscrew-shaped bacterium. Of the 48 tick species found in California, the western black-legged tick (*Ixodes pacificus*) is the only tick thought to be responsible for transmitting the spirochete to people. A different but closely related tick species (*I. scapularis*) transmits spirochetes that cause Lyme disease in the northeastern and upper Midwestern United States, but that tick does not occur in California.

First recognized in the mid-1970s in Lyme, Connecticut, Lyme disease has been reported in the United States, Canada, and many European and Asian countries. The first Californian report of the disease appeared in 1978. State health authorities began monitoring this disease in 1983. A total of 90 cases of Lyme disease were reported to have onset in 2016 within California (CDC, 2017); and in 2017 there were 84 confirmed cases and 64 probable cases (CDC, 2017). Since 2009, there have been four cases of Lyme disease within Kern County as reported by the CDPH Vector-Borne Disease Section Annual Report 2018. These cases occurred in 2009, 2010, 2015, 2016 (CDPH, 2018). Between 2009 and 2018, the highest incidence of Lyme disease was in the northwest counties of California including Sonoma, Santa Cruz, and Santa Clara (CDPH, 2018).

Lyme disease begins in up to 60 to 80 percent of patients as a slowly expanding, reddish rash 3 to 32 days after the bite of an infectious tick. Fifty (50) percent or more of Lyme disease patients may not recall having been bitten by a tick. Many victims experience fatigue, headache, fever, chills, and other flu-like symptoms during the initial stage of illness. Days to weeks later, a variety of other symptoms may occur singly or in combination: secondary rashes, migratory pain in joints, tendons, muscles, or bones; headache, facial palsy; memory loss; and other symptoms involving the lymphatic system, heart, eyes, liver, respiratory system, or kidneys. Finally, a persistent infection normally begins a year or more after the onset of the disease and may involve arthritic, neurologic, or further skin manifestations, profound fatigue, or inflammation of the cornea in the eyes.

Dogs, horses, and other domesticated animals susceptible to Lyme disease may develop arthritis or lameness, lethargy, loss of appetite, disease of the lymph nodes, or other conditions after being infected.

Due to the extensive areas of natural lands that support animals which host ticks that could provide a source of Lyme disease, the ticks are endemic to the area and there is the potential for Lyme disease to occur within the County.

Valley Fever

Coccidioidomycosis, commonly known as Valley Fever, is primarily a disease of the lungs that is common in the southwestern United States and northwestern Mexico. The disease is of critical concern to Kern County. Valley Fever is caused by the fungus *Coccidioides immitis*, which grows in soils in areas of low rainfall, high summer temperatures, and moderate winter temperatures. These fungal spores become airborne when the soil is disturbed by winds, construction, farming, and other activities. In susceptible people and animals, infection occurs when a spore is inhaled. Valley Fever symptoms generally occur within three weeks of exposure. Valley Fever is not a contagious disease, and secondary infections are rare.

It is estimated that more than four million people live in areas where Valley Fever fungus is prevalent in the soils. Residents of Bakersfield, California and Phoenix, Arizona, have shown positive skin-test reaction rates of 30 to 40 percent, meaning that about one-third of residents tested have had Valley Fever sometime in the past. Among those who have never had Valley Fever, the chance of infection is about three percent per year, but the longer one resides in an endemic area, the greater the risk. In the southwestern U.S., there are 100,000 new infections each year.

People working in certain occupations such as construction, agriculture, and archaeology have an increased risk of exposure and disease because these jobs result in the disturbance of soils where fungal spores are found. Valley Fever infection is highest in California from June to November. In addition, many domestic and native animals are susceptible to the disease, including dogs, horses, cattle, coyotes, rodents, bats, and snakes. Most Valley Fever cases are very mild. It is estimated that 60 percent or more of infected people either have no symptoms or experience flu-like symptoms and never seek medical attention.

In 2018, there were almost 3,000 reported cases of Valley Fever and 6 reported deaths in Kern County. With nearly 2,500 cases being reported between the Valley Region (Valley West, Valley North, and Valley Central). Of these approximately 50 cases were in the Valley West Region (KCDPH, 2018a and 2018b).

The Facility's existing operations already have a Report of Composting Site Information (RCSI) that includes a Vector Control Plan detailing various vector control measures used to manage vectors resulting from landfill operations and diversion programs. Storage, handling, and stockpiling activities for organic and agricultural materials associated with existing composting operations are detailed in the Facility's Vector Control Plan and are conducted in a planned and controlled manner to minimize the generation of vector harborage and public nuisances.

4.9.3 Regulatory Setting

Federal

U.S. Environmental Protection Agency (USEPA)

The U.S. Environmental Protection Agency (USEPA) was established in 1970 to consolidate in one agency a variety of federal research, monitoring, standard-setting, and enforcement activities to ensure environmental protection. The USEPA's mission is to protect human health and to safeguard the natural environment – air, water, and land – upon which life depends. The USEPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is

responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for using permits and for monitoring and enforcing compliance. Where national standards are not met, the USEPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act (RCRA)/Hazardous and Solid Waste Act (HSWA)

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the USEPA to regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act (CERCLA)

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as “Superfund,” were enacted by Congress on December 11, 1980. This law (42 United States Code [USC] 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 National Contingency Plan (NCP). The NCP (Title 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 National Priorities List (NPL). CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Clean Water Act (CWA)/Spill, Prevention, Control, and Countermeasure (SPCC) Rule

The Clean Water Act (CWA) (33 USC 1251 et seq., formerly known as the Federal Water Pollution Control Act of 1972) was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of waters of the United States. As part of the CWA, the USEPA oversees and enforces the Oil Pollution Prevention regulation contained in 40 CFR 112, which is often referred to as the “SPCC rule” because the regulations describe the requirements for facilities to prepare, amend, and implement spill prevention, control, and countermeasure (SPCC) plans. A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total aboveground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the “Navigable Waters” of the United States.

Other Regulations

Other federal regulations overseen by the USEPA relevant to hazardous materials and environmental contamination include 40 CFR Parts 100 to 149 -- Water Programs, 40 CFR Parts 239 to 259 -- Solid Wastes, and 40 CFR Parts 260 to 279 -- Hazardous Waste. These regulations designate hazardous substances under the CWA; determine the reportable quantity for each substance that is designated

as hazardous; and establish quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

Occupational Safety and Health Administration (OSHA)

The Occupational Safety and Health Administration's (OSHA's) mission is to ensure the safety and health of U.S. workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA staff establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910.

State

Hazardous Materials Release Response Plans and Inventory Act of 1985

The Hazardous Materials Release Response Plans and Inventory Act, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs. Hazardous materials are defined as unsafe raw or unused materials that are part of a process or manufacturing step. They are not considered hazardous waste. Health concerns pertaining to the release of hazardous materials, however, are similar to those relating to hazardous waste.

Assembly Bill 2948 (Tanner) – County Hazardous Waste Management Plans

In 1988, the State Assembly passed Assembly Bill (AB) 2948 in response to the growing concern regarding hazardous waste management in California. AB 2948 authorized a County, in lieu of preparing the hazardous waste portion of a County Solid Waste Management Plan (CoSWMP), to draft a County hazardous waste management plan. AB 2948 created the Hazardous Waste Control Account in the General Fund and the Hazardous Waste Management Planning Subaccount (CalRecycle, 2018). AB 2948 enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within its jurisdiction. The Kern County and Incorporated Cities Hazardous Waste Management Plan (Hazardous Waste Plan) was first adopted by Kern County and each incorporated City before September 1988 and was subsequently approved by the State Department of Health Services. The Hazardous Waste Plan is incorporated by reference into the *Kern County General Plan* as permitted by Health and Safety Code Section 25135.7(b), and thus must be consistent with all other aspects of the *Kern County General Plan*.

Hazardous Waste Control Act

The Hazardous Waste Control Act created the State hazardous waste management program, which is similar to but more stringent than the federal RCRA program. The act is implemented by regulations contained in Title 26 CCR, which describes the following required aspects for the proper management of hazardous waste:

- Identification and classification;
- Generation and transportation;
- Design and permitting of recycling, treatment, storage, and disposal facilities;
- Treatment standards;
- Operation of facilities and staff training; and
- Closure of facilities and liability requirements.

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with Department of Toxic Substances Control.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

Senate Bill 1082 (1993) created the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), which requires the administrative consolidation of six hazardous materials and waste programs (Program Elements) under one agency, a Certified Unified Program Agency (CUPA). The Program Elements consolidated under the Unified Program are as follows:

- Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs (i.e., Tiered Permitting);
- Aboveground Petroleum Storage Tank Program;
- Hazardous Materials Release Response Plans and Inventory Program (i.e., Hazardous Materials Disclosure or “Community-Right-To-Know”);
- California Accidental Release Prevention Program (Cal ARP);
- Underground Storage Tank (UST) Program; and
- Uniform Fire Code Plans and Inventory Requirements.

The Unified Program is intended to provide relief to businesses in complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs. The Unified Program is implemented at the local government level by CUPAs. Most CUPAs have been established as a function of a local environmental health or fire department. Some CUPAs have contractual agreements with another local agency, a participating agency, which implements one or more Program Elements in coordination with the CUPA.

California Environmental Protection Agency (Cal/EPA)

The Cal/EPA was created in 1991 and unified California’s environmental authority in a single cabinet-level agency and brought the California Air Resources Board (CARB), SWRCB, Regional Water

Quality Control Board (RWQCB), CalRecycle, DTSC, Office of Environmental Health Hazard Assessment (OEHHA), and Department of Pesticide Regulation (DPR) under one agency. These agencies were placed within the Cal/EPA “umbrella” for the protection of human health and the environment and to ensure the coordinated deployment of State resources. Their mission is to restore, protect, and enhance the environment and to ensure public health, environmental quality, and economic vitality.

Department of Toxic Substances and Control

DTSC, a department of Cal/EPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

USC 65962.5 (commonly referred to as the Cortese List) intended to include DTSC-listed hazardous waste facilities and sites, Department of Health Services (DHS) lists of contaminated drinking water wells, sites listed by the SWRCB as having UST leaks or a discharge of hazardous wastes or materials into the water or groundwater and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

California Office of Emergency Services (OES)

In order to protect public health and safety, and the environment, the California OES is responsible for establishing and managing statewide standards for business and area plans relating to the handling and release, or threatened release, of hazardous materials. The OES requires that basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and health risks) be available to firefighters, public safety officers, and regulatory agencies. Typically, this information should be included in business plans in order to prevent or mitigate damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment. These regulations are covered under Chapter 6.95 of the California Health and Safety Code, Article 1—Hazardous Materials Release Response and Inventory Program (Sections 25500 to 25520) and Article 2—Hazardous Materials Management (Sections 25531 to 25543.3).

Title 19 CCR, Public Safety, Division 2, Office of Emergency Services, Chapter 4 - Hazardous Material Release Reporting, Inventory, and Response Plans, Article 4 (Minimum Standards for Business Plans) establishes minimum statewide standards for hazardous materials business plans. These plans must include the following: (1) a hazardous material inventory in accordance with Sections 2729.2 to 2729.7, (2) emergency response plans and procedures in accordance with Section 2731, and (3) training program information in accordance with Section 2732. Business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state. Each business will prepare a hazardous materials business plan if that business uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to the following:

- 500 pounds of a solid substance;
- 55 gallons of a liquid;
- 200 cubic feet of compressed gas;
- A hazardous compressed gas in any amount; or
- Hazardous waste in any quantity.

California Occupational Safety and Health Administration (Cal/OSHA) Safety and Health Regulations

Cal/OSHA is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

California Code of Regulations, Title 14, Division 7, Chapter 3.1.

Compostable materials handling, operations and facilities regulatory requirements are established in CCR Title 14, Division 7, Chapter 3.1. This chapter of the California Code of Regulations identifies the regulatory tiers for composting operations and facilities, as well as excluded activities, design standards, operating standards, environmental health standards, monitoring and recording methods, and site restoration. The project's WDRs issued by the Central Valley RWQCB as Order No. R5-2005-0077 comply with the regulations identified in CCR Title 14, Division 7, Chapter 3.1.

California Highway Patrol

The California Highway Patrol (CHP) is an agency of the State of California with patrol jurisdiction over all California highways. The CHP performs inspections of hazardous materials carriers and enforces hazardous materials transport regulations. A valid Hazardous Materials Transportation License, issued by the CHP, is required by the laws and regulations of State of California Vehicle Code Section 3200.5 for transportation of either:

- Hazardous materials shipments for which the display of placards is required by state regulations; or
- Hazardous materials shipments of more than 500 pounds, which would require placards if shipping greater amounts in the same manner.

Additional requirements on the transportation of explosives, inhalation hazards, and radioactive materials are enforced by the CHP under the authority of the State Vehicle Code. Transportation of explosives generally requires consistency with additional rules and regulations for routing, safe stopping distances, and inspection stops (14 CCR 6 [1] [1150–1152.10]). Inhalation hazards face similar, more restrictive rules and regulations (13 CCR 6 [2.5] [1157–1157.8]). Transportation of radioactive materials is restricted to specific safe routes.

California Department of Transportation (Caltrans)

The California Department of Transportation (Caltrans), CHP, and KCFD regulate transportation of hazardous materials. Drivers must have a hazardous materials endorsement to operate a commercial vehicle carrying hazardous materials. During the transporting of materials, a route map must be maintained that indicates safe routing and safe stopping places along the route.

California Department of Forestry and Fire Protection (CAL FIRE)

The California Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of California's privately-owned wildlands. In addition, CAL FIRE provides varied emergency services in 36 of the State's 58 counties through contracts with local governments. CAL FIRE's firefighters, fire engines, and aircraft respond to an average of more than 5,700 wildland fires each year. Those fires burn nearly 170,000 acres annually.

Local

South Kern Industrial Center Specific Plan (SKICSP)

The proposed project is within the South Kern Industrial Center (SKIC). The SKIC consists of approximately 744 acres which are planned for in the SKIC Specific Plan (SKICSP). The SKICSP is located approximately 18 miles southwest of Bakersfield and approximately 7 miles east of Taft, in unincorporated Kern County. The composting Facility was approved by Kern County under Conditional Use Permit 2, Map 158 (Existing CUP) on October 22, 2002 (Resolution No. 2002-421), along with a Supplemental Environmental Impact Report which was certified on the same date (collectively "Existing Entitlements"). Subsequent to the approvals, the Facility underwent construction and began operations in 2006. The project site is located within the SKICSP, which was most recently amended June 22, 2021 (SPA 159 Map 500). The purpose of the SKICSP is to be used as a planning tool to closely define the planning criteria of the specific plan area and to define the nature and extent of growth and to ensure orderly development. The SKICSP was designed to achieve three primary goals: implement the Kern County General Plan, establish of development standards, and guide the planned development of the SKIC.

The SKICSP contains general goals related to orderly growth and development, coordinated development with the Kern County General Plan, including measures to help ensure hazards are minimized. In Kern County, specific plans, such as the SKICSP, are used to implement goals, objectives, and policies of the Kern County General Plan in a more detailed and refined manner unique to a smaller area of the County. Accordingly, the applicable goals and policies, within the SKICSP, are consistent with those contained in the applicable policies, goals, and implementation measures of the Kern County General Plan. Applicable goals and policies related to hazards and hazardous materials are listed below:

Circulation Element

Implementation Measures

- **Implementation Measure 8:** All parcels within the Specific Plan Area shall be served by roads deemed adequate for fire protection. The Kern County Fire Department shall be contacted during review of land divisions and/or Site Plans for Fire Department approval.

Public Facilities and Services Element

Implementation Measures

- **Implementation Measure 3:** Development proposals shall comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrants.
- **Implementation Measure 9:** New development shall be required to demonstrate the availability of adequate fire protection and suppression facilities, prior to issuance of a building permit. Fire flow requirements within the specific plan area shall be determined by the Kern County Fire Department during the site plan review process. The developers of the plan area shall provide and install fire hydrants at a maximum interval of 330 feet apart along all plan area streets, or as deemed appropriate by the Kern County Fire Department. No building shall be greater than 165 feet from a fire hydrant or water storage tank.
- **Implementation Measure 17:** All water facility storage tanks and pressures vessels shall be limited to a height of 30 feet and shall be painted an earthen hue color. In addition, above ground water facilities shall be enclosed within a 6 foot high chain link fence with redwood slats. All fire hydrants shall be painted a John Deere yellow. The water facilities and distribution system shall be reviewed and approved by the Kern County Fire Department, Kern County Environmental Health Service Department and the Kern County Engineering and Survey Services Department.

Environmental Resource Management Element

Implementation Measures

- **Implementation Measure 28:** The exact location of any abandoned oil wells shall be determined and plotted on future maps associated with this project.
- **Implementation Measure 35:** Unless waived by the Kern County Environmental Health Services Department (KCEHS), a soils report shall be submitted to KCEHS for review prior to the approval of all development projects. The report shall address site specific soil contamination.
- **Implementation Measure 21:** During construction and at the end of each construction work day, stockpiled materials and loaded trucks containing materials susceptible to wind entrainment of dust should be adequately watered down.

Seismic Safety Element

Goals

- **Goal 1:** To encourage precautionary measures which significantly reduce loss of life, bodily injury and property damage resulting from potential hazardous occurrences.
- **Goal 3:** To assure that fire hazardous materials regulation and emergency medical service problems are continuously identified and addressed in a pro-active way in order to optimize safety and efficiency.
- **Goal 4:** To minimize the hazards to public health, safety, and welfare that results from natural and man-made phenomena.

Policies

- **Policy 1:** Minimize the environmental, economic and social impacts stemming from hazardous occurrences such as fire, flood, earthquake, and hazardous materials.
- **Policy 2:** Promote company education regarding matters of fire, hazardous materials and other safety issues incidental to the safe and orderly execution of jobs in the workplace.
- **Policy 3:** Protect Plan Area workers from the risk of injury and property damage that could potentially result from fire hazards, geologic hazards, exposure to potentially hazardous substances.
- **Policy 6;** Develop procedures for the review of the proposed facilities which use, manufacture, and/or store hazardous materials.
- **Policy 7:** Enforce Ordinances regulating the use, manufacturing, sale, storage, transport and disposal of hazardous materials.
- **Policy 8:** Ensure adequate fire protection within the Specific Plan Area and the surrounding areas in order to guard against potential hazards from fires.
- **Policy 9:** Establish and enforce programs for reduction of hazards and geologic risks.

Implementation Measures

- **Implementation Measure 1:** All projects will be subject to the Site Plan Review Process, and Guidelines established herewith in Appendix "A", whereby safety measures can be included in project design and development to minimize potential impacts.
- **Implementation Measure 2:** In the event of a natural or man-made catastrophe, the adopted Kern County Emergency Plan shall be used to provide necessary procedures to safely evacuate workers within the Specific Plan Area. This Emergency Plan shall be available to all employees.
- **Implementation Measure 3:** Approved building and development codes shall be strictly enforced by the appropriate jurisdiction to minimize the probability of geological risk, fire related loss, and exposure to hazardous substances.
- **Implementation Measure 4:** All Industrial facilities shall comply with all Federal, State and local regulations.
- **Implementation Measure 5:** Industrial facilities within the plan area shall conform to the National Fire Protection Association guidelines.
- **Implementation Measure 6:** Development shall comply with the adopted policies of the various elements of the Kern County General Plan.
- **Implementation Measure 9:** The County Fire Department shall be actively involved in review of projects prior to Site Plan approval, and where appropriate, make recommendations to offset impacts associated with project implementation. Project area firms shall inform the Kern County Fire Department of hazardous substances and chemicals expected to be stored and/or

- used onsite. Emergency personnel shall be apprised of appropriate procedures regarding chemical spills and explosions and toxic substances release.
- **Implementation Measure 17:** Manufacturing, storage, handling, and/or use of hazardous materials must conform to the Uniform Fire Code and specific requirements of the Kern County Fire Department.
 - **Implementation Measure 18:** The minimum fire flow shall be as determined by the Kern County Fire Department. Hydrant spacing or water storage tanks shall be no greater than 165 feet from any building or as determined by the Kern County Fire Department.
 - **Implementation Measure 23:** Fire sprinklers will be required for all new buildings constructed, except the Fire Marshall may allow a variance to eliminate this requirement on an individual basis. Industrial facility structures shall also be equipped with fire hydrants, hose cabinets, and hand-held CO2 extinguishers. Plan area employees must be trained in firefighting techniques and in the use of fire suppression equipment.
 - **Implementation Measure 29:** If contaminated soils are discovered during site excavation work, or at any other time, the Kern County Department of Environmental Health Services shall be consulted for appropriate remediation measures.
 - **Implementation Measure 30:** All hazardous material storage and handling areas shall be situated on impermeable surfaces (made from reinforced concrete or similar material) to minimize the possibility of environmental contamination in the event of an accidental spill. Areas where hazardous liquids are handled shall be enclosed by walls or berms.

Kern County General Plan

The project site is located within the Kern County General Plan. Below are the applicable policies, goals, and implementation measures for hazards and hazardous materials found in the Kern County General Plan. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development. Therefore, they are not listed below. However, as stated in **Chapter 2, Introduction**, of this EIR, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Chapter 2. Circulation Element

2.5.4 Transportation of Hazardous Materials

Goal

- **Goal 1:** Reduce risk to public health from transportation of hazardous materials.

Policies

- **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.

Implementation Measures

- **Implementation Measure A.** Roads and highways utilized for commercial shipping of hazardous waste destined for disposal will be designated as such pursuant to Vehicle Code Sections 31303 et seq. Permit applications shall identify commercial shipping routes they propose to utilize for particular waste streams.

Chapter 4. Safety Element

Section 4.2 General Policies and Implementation Measures, Which Apply to More Than One Safety Constraint

Implementation Measures

- **Implementation Measure A.** All hazards (geologic, fire, and flood) should be considered whenever a Planning Commission or Board of Supervisor's action could involve the establishment of a land use activity susceptible to such hazards.
- **Implementation Measure F.** The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by the Federal Emergency Management Agency (FEMA), shall be used as a source document for preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA), evaluation of project proposals, formulation of potential mitigation, and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.

Section 4.6 Wildland and Urban Fire

Policies

- **Policy 3.** The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.
- **Policy 4.** Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.
- **Policy 6.** All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.

Implementation Measures

- **Implementation Measure A.** Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

Section 4.9 Hazardous Materials

Policy

- **Policy 2.** Innovative technologies to manage hazardous waste streams generated in Kern County will be encouraged.

Implementation Measure

- **Implementation Measure A.** Facilities used to manufacture, store, and use of hazardous materials shall comply with the Uniform Fire Code, with requirements for siting or design to prevent onsite hazards from affecting surrounding communities in the event of inundation.

Kern County Wildland Fire Management Plan

The Kern County Wildland Fire Management Plan documents the assessment of wildland fire situations throughout the State Responsibility Areas (SRAs) within the County. The Kern County Fire Department Wildland Fire Management Plan provides for systematically assessing the existing levels of wildland protection services and identifying high-risk and high-value areas that are potential locations for costly and damaging wildfires. The goal of the 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. Based on this assessment, preventive measures are implemented, including the creation of wildfire protection zones.

Kern County Public Health Services Department/Environmental Health Services Division

The Kern County Public Health Services Department/Environmental Health Services Division is the Certified Unified Program Agency for the project area, which provides site inspections of hazardous materials programs (above ground storage tanks, underground storage tanks, hazardous waste treatment, hazardous waste generators, hazardous materials management and response plans, and the California Fire Code). This Department also provides emergency response to hazardous materials events, performing health and environmental risk assessment and substance identification.

Kern County Multi-Jurisdiction Hazard Mitigation Plan

The Kern County Multi-Jurisdiction Hazard Mitigation Plan (KCOES 2012) is meant to guide hazard mitigation planning to better protect the people and property in Kern County from hazard events. This plan was also developed to ensure Kern County and participating jurisdictions continued eligibility for certain Federal disaster assistance—specifically, the Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance (HMA) grants, including the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation Program (PDM), and Flood Mitigation Assistance Program (FMAP). The plan is also important for maintaining and improving the standing of the County in the National Flood Insurance Program (NFIP) Community Rating System (CRS), which provides for lower flood insurance premiums to the residents in the unincorporated areas (KCOES 2012).

Kern County Municipal Code

The Kern County Municipal Code also provides guidance regarding development within areas susceptible to wildland fires. Implementation is through the zoning ordinance, land division ordinance, and building code. Pertinent sections of these ordinances pertaining to fire prevention are discussed below.

Kern County Ordinance No. G-1832

Kern County Ordinance No. G-1832 dictates ingress and egress standards that allow access for fire apparatus. These design standards are enforced within the Hazardous Fire Area during the fire season.

Fuel breaks and/or fire breaks separating communities or clusters of structures from the native vegetation may be required. Such fuel breaks may be “greenbelts,” as all vegetation need not be removed but rather thinned or landscaped to reduce the volume of fuel. All fuel and firebreaks shall meet the minimum design standards of the fire chief, including the Maintenance of Defensible Space requirements of the Kern County Wildland-Urban Interface Code (WUI Code), as follows:

- A firebreak shall consist of a strip, a minimum of 10 feet wide, cleared to mineral soil on each side of a road, or a width determined by the fire chief to be adequate for the general terrain and type of groundcover.
- Firebreaks are not to be used as roads, parking areas, or storage areas.
- All easements for fuel breaks for fire safety of built-up areas shall encompass access for firefighting personnel and equipment, which may mean motorized travel in some cases; such easements shall be dedicated for this specific purpose to an entity composed of the property owners. The property owners shall be charged with the maintenance of such easements.

Kern County and Incorporated Cities Hazardous Waste Management Plan

In response to the growing public concern regarding hazardous waste management, State Assembly Bill 2948 enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within the local government’s jurisdiction.

The Kern County and Incorporated Cities Hazardous Waste Management Plan (Hazardous Waste Plan) was first adopted by Kern County and each incorporated city before September 1988 and was subsequently approved by the State Department of Health Services. The Hazardous Waste Plan was updated and incorporated by reference into the Kern County General Plan in 2004 as permitted by Health and Safety Code Section 25135.7(b), and thus must be consistent with all other aspects of the Kern County General Plan.

The Hazardous Waste Plan provides policy direction and action programs to address current and future hazardous waste management issues that require local responsibility and involvement in Kern County. In addition, the Hazardous Waste Plan discusses hazardous waste issues and analyzes current and future waste generation in the incorporated Cities, County, and state and federal lands. The purpose of the Hazardous Waste Plan is to coordinate local implementation of a regional action to effect comprehensive hazardous waste management throughout Kern County. The action program focuses on development of programs to equitably site needed hazardous waste management facilities; to promote onsite source reduction, treatment, and recycling; and to provide for the collection and treatment of hazardous waste from small-quantity generators. An important component of the Hazardous Waste Plan is the monitoring of hazardous waste management facilities to ensure compliance with federal and state hazardous waste regulations.

Mosquito Abatement and Vector Control

Project features may potentially provide potential breeding sites for mosquitoes, flies, or other vectors. The KCEHSD works co-operatively with the DHS Vector-borne Disease Branch, local government agencies, and mosquito abatement/vector control districts to safeguard the general

public and combat the spread of vector borne diseases within Kern County. The project site is located within the Westside Mosquito and Vector Control District. The KCEHSD is responsible for inspecting the project site for evidence of vector activity if a complaint is received from a member of the public.

4.9.4 Impacts and Mitigation Measures

This section analyzes the impacts associated with implementation of the project related to the risk of upset due to potential hazardous substances, including hazardous materials and/or hazardous waste within the project site and the vicinity, as well as other hazards to public safety. The impact analysis describes the methods used to determine the proposed project's impacts and lists the thresholds used to conclude the significance of an impact. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, as appropriate.

Methodology

The potential impacts associated with the proposed project are evaluated on a qualitative basis through a comparison of existing conditions within the proposed project site and the anticipated project effects. The potential for impacts to hazards/hazardous materials would occur if the effect described under the criteria below occurs. The evaluation of project impacts is based on professional judgment, analysis of the County's hazards/hazardous materials policies, and the significance criteria established by Appendix G of the State CEQA Guidelines, which the County has determined to be appropriate for the analysis in this Draft EIR.

Thresholds of Significance

The Kern County CEQA Implementation Document and the Kern County Environmental Checklist identifies the following criteria, as established in Appendix G of the State CEQA Guidelines, to determine if a project could potentially have a significant adverse effect related to hazards and hazardous materials.

The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to hazards and hazardous materials if it would:

- 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 1/4 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 create a significant hazard to the public or the environment;

- e. For a project located within the adopted Kern County Airport Land Use Compatibility Plan, the project would result in a safety hazard or excessive noise for people residing or working in the project area;
- 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;
- h. Would generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste. Specifically, if it would exceed the following qualitative threshold:

The presence of domestic flies, mosquitoes, cockroaches, rodents, and/or any other vectors associated with the project is significant when the applicable enforcement agency determines that any of the vectors:

- i. Occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and
- ii. Are associated with design, layout, and management of project operations; and
- iii. Disseminate widely from the property; and
- iv. Cause detrimental effects on the public health or well-being of the majority of the surrounding population.

Please note that the environmental issue areas discussed in the IS/NOP are different from those noted above, as Appendix G of the CEQA Guidelines were revised in January 2019 and Kern County's CEQA thresholds were updated accordingly in May 2019, which was after the IS/NOP was published.

Project Impacts and Mitigation Measures

Impact 4.9-1: The project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Construction

The hazardous materials and waste required for construction of the project would consist primarily of fuels, oils, liquid waste, including cleaning fluids, dust palliative, herbicides, and solvents. These materials would be transported to the project site during construction and any hazardous materials that are produced as a result of the construction of the project would be collected and transported away from the site. During construction of the project, material safety data sheets for all applicable materials present at the site would be made readily available to onsite personnel. During construction of the facilities, non-hazardous construction debris would be generated and disposed of in local landfills.

Fuels and lubricants used on field equipment would be subject to the SPCC plan and other measures to limit releases of hazardous materials and wastes (see further discussion of best management practice (BMP) requirements in **Section 4.10, Hydrology and Water Quality**, of this EIR). Recyclable materials including wood, shipping materials, and metals would be separated when possible for recycling. Liquids and oils in the transformer and other equipment would be used in

accordance with applicable regulations. The disposal of all oils, lubricants, and spent filters would be performed in accordance with all applicable regulations including the requirements of licensed receiving facilities. Overall, the relatively limited use of hazardous materials during construction would be controlled through compliance with applicable regulations and would result in a less-than-significant impact.

Operations

The proposed project would only expand operations at the existing Composting Facility and would not require substantive changes in relation to the hazardous materials already in use at the site. The existing Facility is currently used for composting operations of non-hazardous feedstocks. Implementation of the proposed project would allow for an expansion of the type of feedstock used, installation of new equipment, and increasing the pile heights of all materials. To enable processing of the expanded feedstock as required by the regulations, the existing area used for composting operations would be expanded into the approximately 56 acres that is permitted by the existing CUP. This modification to the CUP, however, would not change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre Compost Facility permitted under the existing CUP. The project would enable compliance with AB 1826 and SB1383, which changed the requirements for disposal of organic waste as well as expanded the list of organic wastes that can be accepted at compostable materials handling facilities. In order to facilitate the composting of the new materials, the proposed project would require new processing equipment such as a separator and extruder before being put into the existing covered aerated static pile (CASP) system. Operation of the proposed project would require the use of some petroleum-based products such as oils, diesel fuel, and lubricants for equipment and operation of machinery and needed vehicles but these products are classified as potentially hazardous. Operation of the Composting Facility does not require the use of acutely hazardous materials.

The existing operations include periodic monitoring and testing of composting rows and finished compost product for heavy metals as required by Title 14 of the CCR. The proposed CUP Modification would continue to adhere to Title 14 requirements as overseen by the Kern County Environmental Health Services Department as part of the Facility's Solid Waste Facility Permit. The project would continue to implement these monitoring requirements as well as applicable Waste Discharge Requirements set by the Regional Water Quality Control Board (RWQCB) (see also further discussion of RWQCB requirements in **Section 4.10, Hydrology and Water Quality**) to ensure that materials processed under the project do not exceed hazardous materials thresholds.

In addition, the existing Facility operates under a hazardous materials business plan (HMBP) that is currently file with the Kern County Environmental Health Services Division/Hazardous Materials Section. The HMBP includes a comprehensive spill prevention control and countermeasure (SPCC) plan, and is maintained in accordance with all applicable federal, state, and local regulations. Dust palliatives and herbicides, if used during operations to control vegetation, may be transported to the project site. These materials would be stored in appropriate containers to prevent accidental release. Accordingly, per Mitigation Measure **MM 4.9-1** described below, implementation of the project would include an update of the existing HMBP to include any changes to the hazardous materials or waste use with the project area and would describe proper handling, storage, transport, and disposal techniques and methods to minimize hazards.

Therefore, while the risk of exposure to hazardous materials cannot be fully eliminated, due to the nature of the Composting Facility, the safety measures already implemented, and compliance with Mitigation Measure **MM 4.9-1**, risks to the public or the environment through the routine transport, use, or disposal of hazardous would be considered low. Further, implementation of Mitigation Measure **MM 4.9-1**, which requires an update of the existing HMBP to include any changes to the hazardous materials or waste use with the project and would describe proper handling, storage, transport, and disposal techniques and methods to minimize hazards to a less-than-significant level.

Impacts, therefore, are less than significant and mitigation is not required.

Mitigation Measure

MM 4.9-1: Prior to the issuance of grading or building permits for development into the undeveloped 56 acres, the project proponent shall update the Facility's Hazardous Materials Business Plan to reflect changes to existing operations. Throughout the life of the Composting Facility, including decommissioning, the project operator shall maintain the Hazardous Materials Business Plan, as applicable, pursuant to Article 1 and Article 2 of California Health and Safety Code 6.95 and in accordance with Kern County Ordinance Code 8.04.030, by submitting all the required information to the California Environmental Reporting System at <http://cers.calepa.ca.gov/> for review and acceptance by the Kern County Environmental Health Services Department/Hazardous Materials Section. The Hazardous Materials Business Plan shall:

- a. Delineate hazardous material and hazardous waste storage areas.
- b. Describe proper handling, storage, transport, and disposal techniques.
- c. Describe methods to be used to avoid spills and minimize impacts in the event of a spill.
- d. Describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction and operation.
- e. Establish public and agency notification procedures for spills and other emergencies including fires.
- f. Include procedures to avoid or minimize dust from existing residual pesticides and herbicides that may be present on the site.

The project proponent shall ensure that all contractors working on the project are familiar with the Facility's Hazardous Materials Business Plan as well as ensure that one copy is available at the project site at all times. In addition, a copy of the accepted Hazardous Materials Business Plan from California Environmental Reporting System shall be submitted to the Kern County Planning and Natural Resources Department for inclusion in the projects permanent record.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.9-1**, impacts would be less than significant.

Impact 4.9-2: The project would 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.

Construction

Kern County has a history of oil production and as a result there are numerous existing and abandoned oil production wells throughout the county. According to CalGEM, the project site is not located within a known oil production field, nor does the project site have any known active or abandoned oil wells (CalGem, 2020). As a result, construction and development of the proposed project is unlikely to expose employees or construction workers to the dangers associated with operating a facility near an oil well.

The proposed project does not include any substantial construction activities that would be anticipated to result in a significant release of hazardous materials into the environment. During installation and use of the new equipment for expanded composting operation, there is a slight possibility of accidental release of hazardous substances, such as spilling petroleum-based fuels used for to transport machinery and equipment facilitate installation. The level of risk associated with the accidental release of hazardous substances is not considered significant because of the small volume and low concentration of hazardous materials utilized during this phase. During this time, all work conducted would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of materials into the environment. Standard construction practices would be observed such that any materials released would be appropriately contained and remediated as required by local, State, and Federal law. Implementation of Mitigation Measure **MM 4.9-1**, which would provide methods to be used to avoid spills and minimize impacts in the event of a spill by providing procedures for handling and disposing hazardous materials as well as public and agency notification procedures for spills and other emergencies including fires, would reduce this impact to a less-than-significant level.

Operation

The State Water Resources Control Board (SWRCB) Geotracker website was reviewed to help determine whether hazardous materials have been handled, stored or generated on the proposed project site and/or the adjacent properties and businesses that may affect the project site. GeoTracker is the Water Boards' data management system for sites that impact, or have the potential to impact, water quality in California. GeoTracker contains records for sites that require cleanup, such as Leaking Underground Storage Tank (LUST) Sites, Department of Defense Sites, and Cleanup Program Sites. GeoTracker also contains records for various unregulated projects as well as permitted facilities including: Irrigated Lands, Oil and Gas production, operating Permitted USTs, and Land Disposal Sites.

As discussed above, there were no listings for the project site indicating that hazardous materials are used, handled, disposed of, or that there has been a hazardous materials incident at the project site. It should be noted that the under the proposed Modified CUP, the Facility would maintain its existing Solid Waste Facility Permit and all hazardous, radioactive, designated, and medical wastes would not be permitted to be composted. Continued and expanded composting operations would continue to adhere to Title 14 CCR to ensure that the materials are not hazardous and as a result would be unlikely to be at risk of exposure due to upset and accident conditions.

As an active Composting Facility, hazardous waste is not accepted at the project site. The Facility is not open to the general public and the concentration of hazardous waste inadvertently entering the Facility is minimal. Any other hazardous materials associated with operation of the proposed expanded Facility at the site would be contained within specifications that follow applicable federal state and local requirements as identified in the HMBP. OSHA requirements also call for the inclusion of onsite spill protection supplies to address any inadvertent release of hazardous materials that might occur.

Removal and/or maintenance of vegetation may require pesticide and herbicide use during operations. If not handled properly, use of these products could create a hazard to the public (construction workers, maintenance employees, and nearby residences), resulting in a potentially significant impact. Implementation of Mitigation Measure **MM 4.9-2** would reduce impacts related to use of pesticides and herbicides to a less-than-significant level.

Therefore, adherence to applicable local, State, and federal regulations, along with standard protocols and implementation of Mitigation Measures **MM 4.9-1** and **MM 4.9-2** would minimize or reduce potential exposure from upset and accident conditions to a less than significant level.

Mitigation Measures

Implementation of Mitigation Measure **MM 4.9-1** and

MM 4.9-2: The project proponent shall continuously comply with the following:

- a. The construction contractor or project personnel shall use herbicides that are approved for use in California and are appropriate for application adjacent to natural vegetation areas (i.e. non-agricultural use). Personnel applying herbicides shall have all appropriate state and local herbicide applicator licenses and comply with all state and local regulations regarding herbicide use.
- b. Herbicides shall be mixed and applied in conformance with the manufacturer's directions.
- c. The herbicide applicator shall be equipped with splash protection clothing and gear, chemical resistant gloves, chemical spill/splash wash supplies, and material safety data sheets for all hazardous materials to be used. To minimize harm to wildlife, vegetation, and water bodies, herbicides shall not be applied directly to wildlife.
- d. Products identified as non-toxic to birds and small mammals shall be used if nests or dens are observed; and herbicides shall not be applied if it is raining at the site, rain is imminent, or the target area has puddles or standing water.
- e. Herbicides shall not be applied when wind velocity exceeds 10 miles per hour. If spray is observed to be drifting to a non-target location, spraying shall be discontinued until conditions causing the drift has abated.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.9-1** and **MM 4.9-2**, impacts would be less than significant.

Impact 4.9-3: The project would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 1/4 mile of an existing or proposed school.

As discussed above, the proposed project is a composting site and does not handle, use, or store acutely hazardous materials. Some fuels, lubricants, cleaning materials, and other such solvents may be used on site for general maintenance purposes but these materials would be used in accordance with manufacturers specifications. The project site is located in an area characterized by large tracts of agricultural and industrial uses. There are no existing or proposed schools within 0.25 miles of the project site. The nearest school to the project site is Lakeside School (K-8), located approximately 9.5 miles northeast of the project site in unincorporated Kern County. Therefore, impacts in this regard would not occur and no mitigation is required.

Mitigation Measures

No Mitigation is required.

Level of Significance

No impacts would occur.

Impact 4.9-4: The project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment.

As discussed in Impact 4.9-2 above, the Waterboard's Geotracker website was referenced and did not list the project site or any immediately adjacent areas as Hazardous Material Site. A review of the Cal/EPA DTSC's latest list of data resources providing information regarding the facilities or sites identified as meeting California Government Code Section 65962.5 requirements relating to hazardous wastes has been conducted and has determined the project site is not listed as a hazardous waste or substance site. Therefore, no impact would occur.

Mitigation Measures

No mitigation is required.

Level of Significance

No impacts would occur.

Impact 4.9-5: For a project located within the adopted Kern County Airport Land Use Compatibility Plan, the project would result in a safety hazard or excessive noise for people residing or working in the project area.

The proposed project is not located within an area covered by an adopted Kern County Airport Land Use Compatibility Plan nor does it fall within any specific airport sphere of influence identified in the Plan. The nearest major airport is the Taft-Kern County Airport approximately 10 miles west of the project site. The nearest private airports are Skydive San Joaquin located approximately 10 miles to the southeast and Paradise Lakes Estates and Airport Park community, located approximately 17 miles east of the project site. Impacts in this regard would not occur and no mitigation is required.

Mitigation Measures

No Mitigation is required.

Level of Significance

No impacts would occur.

Impact 4.9-6: The project would impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

Sufficient emergency access is determined by factors such as number of access points, roadway width, and proximity to emergency service providers (e.g., fire stations). The project site includes a primary entrance to Santiago Road from South Lake Road. South Lake Road is a two lane road that connects to Gardener Field Road and then to SR 33 in Taft approximately 11 miles to the west. To the east, South Lake Road connects to the Interstate 5 (I-5) approximately 8 miles away via Hill Road and Millux Road, which are both two lane roadways.

Direct access to the project site is provided on the north west corner of the site, which provides access to the main office buildings and paved parking lot, providing adequate turn-around area for emergency vehicles and access to the interior dirt roads linking the different areas within the project site. All existing access points and interior roads within would accommodate an emergency vehicle.

The project does not remove or alter a portion of existing emergency response plans or evacuation routes during construction or operation of the project. The project does not propose any operations or functions that would reduce or restrict the adequate accessibility for emergency responders. The project does not propose new or physically altering of service ratios, response times, or to other performance objectives for any of the public services, particularly emergency response. Additionally, water supplies and firefighting infrastructure is located on the project site and could be used in the event of a fire hazard. Therefore, no impacts on an adopted emergency response plan or emergency evacuation plan would occur.

Mitigation Measures

No Mitigation is required.

Level of Significance

No impacts would occur.

Impact 4.9-7: The project would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

The project is not in an area of “Federal Responsibility” and is not identified as being a wildland fire interface on the California Department of Forestry and Fire Protection Fire Hazard Severity Zones Map for Kern County. The project is not located along an identified emergency evacuation route or within an adopted emergency evacuation plan related to wildland fires. The proposed project site is flat, almost completely devoid of vegetated areas and is surrounded by agricultural land that is largely in a fallow state and routinely disked and bare, as well as a solar farm, and an oil and gas facility to the north. The land between the project site and the oil and gas facility consists of a disturbed area

with upland ruderal vegetation. None of the surrounding areas are considered susceptible to wildland fires. Therefore, wildland fires do not have the potential to affect the site and no impacts would occur.

Mitigation Measures

No mitigation is required.

Level of Significance

No impacts would occur.

Impact 4.9-8: Implementation of the Project Would Generate Vectors or Have a Component That Includes Agricultural Waste Exceeding Adopted Qualitative Thresholds.

Composting activities are part of the existing operations at the project site that are approved under the Existing CUP. The proposed project could provide increased opportunities for vectors by accepting new feedstocks that may be an attractant, or result in additional areas with standing water, or open containers that could provide breeding areas for mosquitoes, flies, or rodents. This could increase the opportunities for interaction with existing insect and rodent species and for new populations of vectors to be introduced onto the project site. The amendment to the CUP would allow for the new feedstocks and increased pile size and composting operations could be expanded to utilize the entire 100-acre permitted compost site. Storage, handling, and stockpiling activities for organic and agricultural materials associated with existing composting operations are detailed in the Facility's Vector Control Plan and are conducted in a planned and controlled manner to minimize the generation of vector harborage and public nuisances. Feedstocks are received in designated areas and then processed through various machinery to either remove contamination or processed for size reduction, which reduces the potential for the generation of vectors and is a natural deterrent to flies and the development of fly larvae.

Compostable materials handling, operations and facilities regulatory requirements are established in CA Title 14, Division 7, Chapter 3.1. In accordance with these regulations, the proposed project would be required to satisfy CalRecycle's requirements and its designated local enforcement agency. Related to vector control for compost facility operations these regulations establish permitting and inspection requirements; outlines general operating standards; and specifically requires materials handling in a manner that minimizes vectors and prevents unauthorized access by individuals and animals; outlines pathogen reduction and sampling requirements; establishes recordkeeping and facility closure requirements to verify these conditions are satisfied. In addition, the regulations require that the operator shall take adequate steps to control or prevent the propagation, harborage and attraction of flies, rodents, or other vectors, and animals, and to minimize bird attraction.

The Facility's existing operations already have a RCSI that includes a Vector Control Plan detailing various vector control measures used to manage vectors resulting from landfill operations and diversion programs. Implementation of Mitigation Measure **MM 4.9-3** would require the project proponent update the Facility's RCSI and Vector Control Plan to include the updated material types, pile heights, and increased operation area in order minimize the project's potential to generate vectors. Each of these documents would be required to be updated per Title 14 and Title 27 CCR regulations to demonstrate the proposed operational changes and new control measures associated with composting activities. With implementation of Mitigation Measure **MM 4.9-3**, the potential to generate vectors from the proposed project would be less than significant.

Mitigation Measures

MM 4.9-3: Prior to the acceptance of the expanded feedstock materials into the Facility, the project proponent shall update the Facility's existing Report of Composting Site Information, including the Vector Control Plan and submit it to the Kern County Environmental Health Services Division for review and approval. The Plan shall include Best Management Practices such as: good housekeeping measures to minimize harborage for vectors, and the timely incorporation of material into the composting process. Further controls may include the use of traps or other abatement controls, and/or the use of a licensed pest management service if needed.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.9-3**, impacts would be less than significant.

Cumulative Setting, Impacts and Mitigation Measures

As described in **Chapter 3, Project Description**, multiple projects were provided in **Table 3-4** that are located throughout Kern County. These projects range in scope and include renewable energy projects, development, and others. The geographic scope of impacts associated with hazardous materials generally encompasses the project site and a 0.25-mile-radius area around the project sites. Hazardous materials incidents tend to be site specific, however a 0.25-mile-radius area allows for a conservative cumulative analysis to ensure that all potential cumulative impacts will be assessed. Risks related to hazards and hazardous materials tend to be localized in nature since they tend to be related to onsite existing hazardous conditions and/or hazards caused by a project's construction or operation. A geographic scope of a 0.25-mile-radius area also coincides with the distance used to determine whether hazardous emissions or materials would have a significant impact upon an existing or proposed school, as discussed above.

The proposed project would not handle any substantive quantities of hazardous materials such that there would be negligible emissions associated with the project elements. Impacts regarding accident or upset conditions of hazardous materials would be localized due to the quantities involved at the site as well as those of the cumulative projects within a 0.25-mile radius. Unauthorized releases could occur but unless multiple events would occur simultaneously, most spill incidents are localized and contained and addressed through existing regulatory requirements. A hazardous material release during project construction or operation through upset or accident conditions including site grading and the use and transport of petroleum-based lubricants, solvents, fuels, batteries, herbicides, and pesticides to and from the project site would tend to be isolated and localized in geographic extent. The distance of the other projects considered in the cumulative analysis is such that an accidental release or discovery of hazardous materials at the project site would be unlikely to combine with other cumulative projects due to the region's characteristics and low probability of contemporaneous incidents to occur; therefore, the project would not contribute to cumulative impacts from accidental releases or discovery of hazardous materials. Conformance with existing state and County regulations, as well as project safety design features and the implementation of Mitigation Measures **MM 4.9-1** through **MM 4.9-3** identified above would further reduce cumulative impacts. Given the minimal risks of hazards at the project site, cumulative impacts are unlikely to occur. Therefore, impacts would not be cumulatively significant.

Mitigation Measures

Implement Mitigation Measures **MM 4.9-1** through **MM 4.9-3**.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.9-1** through **MM 4.9-3**, impacts would be less than significant.

Section 4.10

Hydrology and Water Quality

4.10.1 Introduction

This section of the Environmental Impact Report (EIR) addresses potential impacts of the project on hydrology and water quality, describes the environmental and regulatory setting, and discusses mitigation measures to reduce impacts where applicable. The information in this section is based in part on climate data from the Western Regional Climate Center (WRCC) flood hazard data from the Federal Emergency Management Agency (FEMA), and the Waste Discharge Requirements (WDR) for the South Kern Industrial Center (Order No. R5-2005-0077).

4.10.2 Environmental Setting

As described in **Chapter 3, Project Description**, the proposed project would occur entirely within an existing 100-acre permitted Composting Facility located at 2653 Santiago Road. The City of Taft is the closest city to the proposed project, approximately 12 miles west of the project site. The Project site is located approximately 12 mile east of the City of Taft and the unincorporated communities of Taft Heights and Ford City which are adjacent to the south and north of the City of Taft. The unincorporated communities of Dustin Acres and Valley Acres are located approximately 10 miles northwest of the project site along State Route (SR-119). The Composting Facility operates under existing Conditional Use Permit No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) (existing CUP). The proposed modifications to the CUP would allow the Facility to receive and manage newly defined types of organic waste streams for composting, as required by CalRecycle. To enable processing of the expanded feedstock as required by the regulations, the existing area used for composting operations could be expanded by approximately 56 acres as permitted by the existing CUP. The modification to the CUP, however, would not change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre Compost Facility permitted under the existing CUP.

Regional Setting

The project site is located in the southwestern portion of the historic Tulare Lake basin, in California's southern Central Valley. The Tulare Hydrologic Region includes the alluvial fans of the Kings, Kaweah, Tule, and Kern Rivers, as well as various smaller stream originating in the Sierra Nevada and its foothills. Historically, these rivers, as well as areas located in the vicinity of the project site, drained internally within the hydrologic region, into five lakes: Tulare Lake, Kern Lake, Buena Vista Lake, Goose Lake, and Summit Lake, which were connected by a series of sloughs. Present day water sources to the region include rainfall, natural waterways, and water imported from the State Water Project and Central Valley Project aqueducts.

Topography

The project site is located in the Mount Diablo Base and Meridian. The project is located in the Valley Region in the western portion of unincorporated Kern County, California, and is outside the sphere

of influence (SOI) of any cities. The Valley Region is within the Tulare Lake Hydrologic Basin in the San Joaquin Valley. The Valley Region is characterized by low rainfall, relatively high average summer temperatures, and generally mild winters. The Valley Region has greater temperature extremes than the coastal areas because it is less affected by the moderating influence of the Pacific Ocean.

Topography in the Valley Region is generally flat. Steeper, mountainous topography surrounds the Valley Region, in the Mountain Region, with the Sierra Nevada Mountains to the east, the San Emigdio and Tehachapi Mountains to the south, and the Coast Range Mountains to the west.

Climate

The climate of the Tulare Basin is characterized by hot, dry summers and mild winters with relatively low annual precipitation. Average temperatures recorded in the city of Bakersfield range from average lows of 35° Fahrenheit (F) in December to average highs of 101° F in July (Western Regional Climate Center, 2020). The local climate is typical of the southern Central Valley of California. **Table 4.10-1, Average Monthly Temperatures and Precipitation for the Tulare Basin, Kern County**, summarizes average temperatures and precipitation for Bakersfield, a weather station located approximately 20 miles northwest of the project site, but which can be considered typical of the Tulare Basin, including the project area.

The annual precipitation is 5.7 inches. Winters are typically fairly humid, mild, and semi-arid. Tule fog, a nocturnal fog, occurs in December and January when the North Pacific High traps marine air in the San Joaquin Valley (Western Regional Climate Center, 2020),

Table 4.10-1: Average Monthly Temperatures and Precipitation for the Tulare Basin, Kern County

Station	Elevation	Average Maximum Temperature	Average Minimum Temperature	Average Annual Precipitation
Bakersfield 5 NW, CA (Coop ID 040444)	492 ft	77.2°F*	51.0°F*	5.7 in/yr

Source: Western Regional Climate Center, 2020, Available: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0444>

*Western Regional Climate Center, 2012, Available: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0444>

Project Setting

Project Topography

The 100-acre project site occurs in the southwestern portion of the valley floor, in a relatively flat and level plain. Accordingly, the project site is level to gently sloping from a high at the southerly composting area boundary from approximately 325 feet on approximately 315 feet above mean sea level (amsl) on the northerly side of the project site and from west to east is almost level.

Surface Water Resources

The project site is relatively flat, sloping gently down to the north approximately 10 feet over a distance of approximately 1,300 feet. An existing six-foot-wide earthen berm surrounds the composting site and helps retain water on-site and prevents both run-off and run-on water to and from

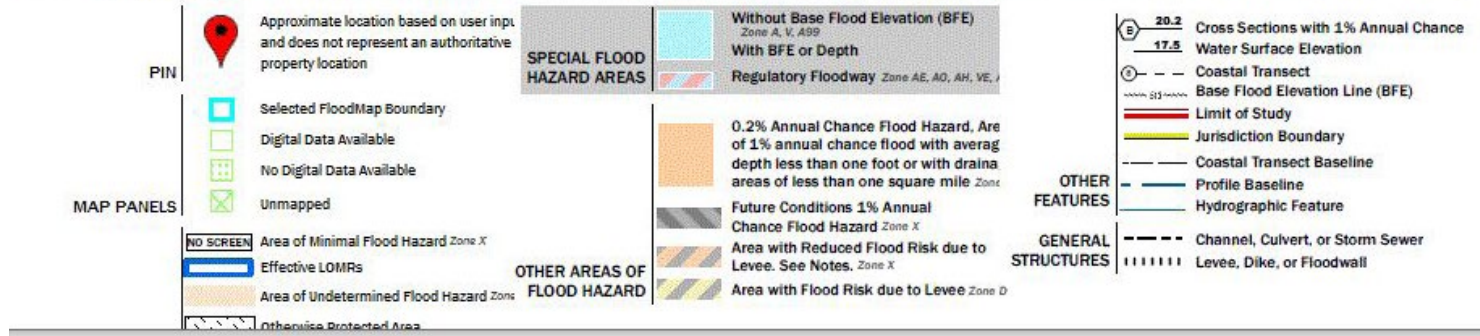
off-site areas. Stormwater within the Composting Facility is conveyed via existing drainage systems including drainage channels that conduct water to swales located on the inside of the berm and that conduct water to the northern side of the site. On the northern side of the site there is a retention basin for containment of process water and a storm water runoff. The basin is elongated and rectangular in shape (2,270 feet by 120 feet in width), approximately 2.5 acres in size, and borders almost all of the northerly project boundary. There are no natural streams or other natural waterways located on the project site or in the immediate vicinity of the composting area or within the overall area of the project parcel. The high local infiltration and evaporation rate together with the moisture controls that are utilized in the existing Composting Facility's aerobic windrow process minimize the generation of leachate and ponding.

The retention basin has a base elevation of approximately 315 feet above msl. This retention basin is operated in accordance with Central Valley RWQCB Order No. R5-2005-0077, which requires the Facility to have an onsite stormwater retention pond designed to wholly contain the 100 year, 24-hour storm event. Consequently, the Facility is engineered and designed to withstand run-on and contain runoff associated with a 100 year, 24-hour storm event. In this manner, drainage within the existing composting operations area is wholly maintained within the bermed area, even during 100-year storm events.

The area immediately surrounding the Composting Facility includes include solar installations to the west, south, and east. A petroleum oil refinery with three tanks and petroleum piping is located to the north across Santiago Road. Although the surrounding area is relatively flat and devoid of substantial topography, stormwater that does not infiltrate the ground of the surrounding areas would generally move via sheetflow following the contours of the land. The surrounding areas do contain agricultural drainages and ditches that convey water along the margins of the fields and generally to the north with the slope of the land. Due to the absence of substantial topography and large drainages, most stormwater would be anticipated to infiltrate, or in larger storm events, pond, and then infiltrate or evaporate.

Floodplains

The Federal Emergency Management Agency (FEMA) delineates flood hazard areas on its Flood Insurance Rate Maps (FIRMs). According to the most recent FEMA FIRM (06029C2700R effective 09/26/2008), the project site is located within a Zone A special flood hazard area (SFHA); see **Figure 4.10-1, FEMA Flood Zone Map** (FEMA, 2008). SFHA's Zone A are defined as the area that would be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood (FEMA, 2020).



SOURCE: FEMA, USGS, 2018



FEMA Flood Zone Map

Figure 4.10-1

Soil Types and Erosion

Based on information collected from the National Resources Conservation Service, soils in the project site are divided between Calflax Loam in the southwestern half and Posochanet silt loam in the northeasterly portion of the site; see **Figure 4.7-2, SKIC Soil Map**. Calflax Loam has slopes of less than 1 percent and are alluvial soils characterized by at least 36 inches of sandy to silty loam, with limited clay loam. Clayey features are generally nonrestrictive to infiltration, and the soils are considered well-drained. These soils exhibit rare flooding and virtually no ponding. Posochanet silt loam are alluvium derived from granitoid and or sedimentary rock, and are characterized by silt loam, silty clay loam, clay loam, loam, and silt loam to depth of approximately 62 inches. The soils are moderately well drained, have a low runoff class but are associated with floodplains and may be hydric.

Groundwater Resources

The project area is situated near the southwestern end of the San Joaquin Valley Groundwater Basin (SJVGB), which lies within the San Joaquin River and Tulare Lake Hydrologic Regions (HRs). The SJVGB terminates at the Tehachapi Mountains to the south, extends north to the Delta, and is flanked on the east by bedrock of the Sierra Nevada range, and to the east by bedrock of the Coastal Range. More specifically, the project overlies the Kern County Subbasin (Subbasin) as defined by the California Department of Water Resources (DWR, 2006). The Kern County Subbasin is within the Tulare Lake Hydrologic Region and comprises an area of approximately 1,945,000 acres (3,040 square miles) in Kern County.

The Subbasin represents the southern tip of a structural trough that underlies the present-day San Joaquin Valley. The trough is filled with marine sediments that were transported into the present-day valley as alluvium; it is up to 200 miles long and 70 miles wide. Specific water bearing units in the Subbasin include river deposits and flood basin deposits, as well as older alluvium, stream deposits, the Tulare and Kern River formations, the Santa Margarita Formation, and the Olcese Formation. Due to complex stratigraphy, certain areas of the Subbasin include perched, unconfined, and confined aquifers. Groundwater depths and flows in the Subbasin are informed by its structure, with flows in the project area generally flowing downgradient toward historically lower elevation areas – that is, roughly coincident with historic lake areas. Flows specific to the project site have not been determined. Groundwater depths in confined aquifers in the Subbasin range from 50 to 500 feet below ground surface (bgs). Unconfined shallow or perched aquifers generally have depths of less than 5 feet to 20 feet bgs. From 1970 to 2000, average groundwater levels in the Subbasin remain unchanged, although the net water level can change dramatically over time.

The Subbasin receives recharge water primarily from the eastern portion of its area, via stream channels and the Kern River. Other substantial sources of groundwater recharge include infiltration of irrigation water, which constitutes the primary means of recharge in the Subbasin, as well as various local groundwater banking programs, which provide localized groundwater recharge. These are not, however, located in close proximity to the project. DWR has characterized the Subbasin as being in a state of critical overdraft, although the Subbasin was never adjudicated. According to DWR (2006), inflows to the Subbasin total approximately 1.5 million acre-feet per year (AFY), while total outflows comprise 1.4 million AFY.

Groundwater Quality

The United States Geological Survey (USGS) and the WRQCB evaluated ground water quality in the Kern County Subbasin. The study area mirrored the basin areas discussed above and included an area bounded by the Kern, Kings, and Tulare County lines to the north, the granitic bedrock of the Sierra Nevada and Tehachapi Mountains to the east and southeast, and the marine sediments of the San Emigdio Mountains and Coast Ranges to the southwest and west, and noted that the Kern River, which originates in the Sierra Nevada, is the primary stream flowing through the study unit (USGS, 2012).

The primary aquifers in the Subbasin consist of alluvial sediments (mixtures of sand, silt, clay, cobbles, and boulders), and marine and continental deposits in the deeper portion of the aquifers. Downward flow of groundwater is impeded by a subsurface clay layer, known as the Corcoran clay, in the central part of Subbasin. The primary sources of recharge are from the Kern River and artificial recharge at groundwater banking facilities that exist throughout most of the study unit. Secondary sources of recharge include return flows from agricultural and municipal irrigation and infiltration of flows from intermittent streams along the edge of the Subbasin. The primary sources of groundwater discharge are water pumped for irrigation and municipal supply (USGS, 2012).

While many inorganic constituents occur naturally in groundwater, the concentrations of inorganic constituents can be affected by natural processes as well as human activities. Within the basin, one or more inorganic constituents were present at high concentrations in 23% of the primary aquifers and at moderate concentrations in 29%. In addition, organic constituents are common in products used in the home, business, industry, and agriculture and can enter the environment through normal usage, spills, or improper disposal. Organic constituents were present at high concentrations in 2% of the primary aquifers and at moderate concentrations in 8%. It should be noted that the primary aquifers are defined as those parts of the aquifers corresponding to the perforated intervals of wells listed in the California Department of Public Health database. Water quality in the primary aquifers may differ from that in the shallower and deeper parts of the aquifer system.

Within the Subbasin, inorganic constituents include trace and minor elements, uranium and radioactive constituents, nutrients, and total dissolved solids, and iron or manganese. Trace and minor elements are naturally present in the minerals in rocks and soils, and in the water that comes into contact with those materials. Some constituents, such as total dissolved solids (TDS), sulfate, and chloride, affect the aesthetic properties of water, such as taste, color, and odor. Other constituents, such as iron and manganese, can create nuisance problems, such as scaling and staining. In the Kern study unit, some trace elements were present at high concentrations in 20% of the primary aquifers, and at moderate concentrations in 27%. Other inorganic constituents were present at low, moderate, and high concentrations but in smaller percentages of the primary aquifers, ranging from as little as 2% to as much as 17%.

In addition to inorganic constituents, there are special interest constituents and organic constituents. Special interest constituents include perchlorate and N-Nitrosodimethylamine (NDMA). The California Department of Public Health (CDPH) monitors for these chemicals. Perchlorate was not present at high concentrations but was present at moderate concentrations in 6% of aquifers. No NDMA was present in high or moderate concentrations.

Organic constituents including volatile organic carbons (VOCs) and pesticides, fumigants, trihalomethanes, and other VOCs are used by households, commercial, industrial, and agricultural products. Solvents found at high concentrations included carbon tetrachloride and trichloroethene. Solvents were present at moderate concentrations in 4% of the primary aquifers; trihalomethanes were present at moderate concentrations in 4% of the primary aquifers, and other VOCs, while not present at high concentrations were present in moderate concentrations in about 2% of the primary aquifers. The VOC found at moderate concentrations was benzene, which is a gasoline hydrocarbon. Lastly, pesticides to help control unwanted vegetation (weeds), insects, fungi, and other pests were not detected at high or moderate concentrations in the primary aquifers. The fumigant 1,2-dibromo-3-chloropropane (DBCP), the use of which was discontinued in 1977 in California was present at high concentrations in 2% of the primary aquifers. DBCP and other fumigants were present at moderate concentrations in 4% of the primary aquifers.

4.10.3 Regulatory Setting

Additional regulations related to hydrology and water quality impacts are presented in **Section 4.4, Biological Resources**, **Section 4.7, Geology and Soils**, **Section 4.9, Hazards and Hazardous Materials**, and **Section 4.17, Utilities and Service Systems**.

Federal

Clean Water Act (CWA)

The CWA (33 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. The CWA requires individual 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 National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). In California, NPDES permitting authority is delegated to, and administered by, the nine RWQCBs.

The primary responsibility for the protection of water quality in California rests with the SWRCB and nine regional water quality control boards (RWQCBs). The SWRCB sets Statewide policy for the implementation of State and Federal laws and regulations. The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans) that recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The jurisdiction of the Central Valley RWQCB extends from the Oregon border to the northern tip of Los Angeles County and encompasses about 60,000 square miles, or nearly 40 percent of the state. It includes all or part of 38 of California's 58 counties and nearly 80 percent of the State's irrigated agricultural land.

Section 401, Water Quality Certification

Section 401 of the CWA requires that any activity, including river or stream crossing during road, pipeline, or transmission line construction, which may result in discharges into a State water body, must be certified by the State, as administered by the RWQCB. This certification ensures that the proposed activity does not violate State and/or federal water quality standards.

Section 402, National Pollutant Discharge Elimination System (NPDES)

Section 402 of the Clean Water Act authorizes the State Water Resources Control Board (SWRCB) to issue a NPDES General Construction Storm Water Permit (Water Quality Order 2009-0009-DWQ), referred to as the “General Construction Permit.” Construction activities can comply with and be covered under the General Construction Permit provided that they:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that would prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving off site into receiving waters.
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation.
- Perform inspections of all BMPs.

NPDES regulations are administered by the Central Valley RWQCB.

Section 404, Discharge of Dredged or Fill Materials

Section 404 of the CWA establishes programs to regulate the discharge of dredged and fill material in waters of the U.S., including wetlands. For purposes of section 404 of the CWA, the limits of non-tidal waters extend to the Ordinary High Water (OHW) line, defined as the line on the shore established by the fluctuation of water and indicated by physical characteristics, such as natural line impressed on the bank, changes in the character of the soil, and presence of debris. When an application for a Section 404 permit is made, the applicant must show it has:

- Taken steps to avoid impacts to wetlands or waters of the U.S. where practicable;
- Minimized unavoidable impacts on waters of the U.S. and wetlands; and
- Provided mitigation for unavoidable impacts.

Section 404 of the CWA requires a permit for construction activities involving placement of any kind of fill material into waters of the U.S. or wetlands. A Water Quality Certification pursuant to Section 401 of the CWA is required for Section 404 permit actions. If applicable, construction would also require a request for Water Quality Certification (or waiver thereof) from the Central Valley RWQCB. Project activities would adhere to State and federal water quality standards and would be in compliance with Sections 401 and 404 of the CWA.

Section 303, Water Quality Standards and Implementation Plans

Section 303(d) of the CWA (CWA, 33 USC 1250, et seq., at 1313(d)) requires states to identify “impaired” water bodies as those which do not meet water quality standards. States are required to compile this information in a list and submit the list to the U.S. EPA for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, states are required to prioritize waters and watersheds for future development of Total Maximum Daily Load

(TMDL) requirements. The SWRCB and RWQCBs have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to develop TMDL requirements.

National Flood Insurance Program (NFIP)

FEMA is responsible for managing the National Flood Insurance Program (NFIP), which makes federally backed flood insurance available for communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage.

The NFIP, established in 1968 under the National Flood Insurance Act, requires that participating communities adopt certain minimum floodplain management standards, including restrictions on new development in designated floodways, a requirement that new structures in the 100-year flood zone be elevated to or above the 100-year flood level (known as base flood elevation), and a requirement that subdivisions be designed to minimize exposure to flood hazards. To help identify areas with flood potential, FEMA has developed FIRMs that can be used for planning purposes, including floodplain management, flood insurance, and enforcing mandatory flood insurance purchase requirements. Kern County is a participating jurisdiction in the NFIP, and therefore, all new development must comply with the minimum requirements of the NFIP.

State

State Water Resources Control Board

The National Pollution Discharge Elimination System (NPDES) was established per the 1972 amendments to the Federal Water Pollution Control Act, or Clean Water Act (CWA), to control discharges of pollutants from point sources (Section 402). Amendments to the CWA created a new section to the Act, which is devoted to stormwater permitting (Section 402[p]), with individual states designated for administration and enforcement of the provisions of the CWA and the NPDES permit program. The SWRCB issues both general construction permits and industrial permits under this program.

Regional Water Quality Control Board (RWQCB)

Responsibilities for water quality control are defined under Title 23 CCR, which is overseen primarily by RWQCBs. The RWQCBs are responsible for protecting beneficial uses of water. Beneficial uses, which can be actual or potential, include municipal water supply, recreation, industrial water supply, and agricultural water supply. The RWQCBs have authority to supervise hazardous waste cleanup at sites referred by local agencies and in cases where water quality is affected or threatened.

California Water Code Section 13260 requires “any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements).” Under the State’s Porter-Cologne Water Quality Control Act (Porter-Cologne Act) definition, the term waters of the State is defined as “any surface water or groundwater, including saline waters, within the boundaries of the state.” Although all WOTUS that are within the borders of California are also waters of the State, the converse is not true (i.e., in California, WOTUS represent a subset of waters of the State). Thus, California retains authority to regulate discharges of waste into any waters of the State, regardless of whether the USACE has concurrent jurisdiction under Section 404.

The RWQCB is responsible for enforcement of the provisions of the anti-degradation objectives of SWRCB Resolution No 68-16 requiring that waters of the State be maintained “consistent with the maximum benefit to the people of the State.” It is the intent of these regulatory procedures that groundwater degradation be prevented, not delayed, by the requirements and enforcement of project-specific Waste Discharge Orders.

Water Discharge Requirements

State regulations addressing the treatment, storage, processing, or disposal of waste are included in 27 CCR. The SWRCB adopted Order No. WQ 2015-0121-DWQ in August 2015, which establishes general waste discharge requirements for composting operations. This general order applies to most composting facilities that receive and process organic material to create compost. The order includes monitoring and reporting requirements, and includes standards related to permeability, drainage, and leachate collection/containment.

The Central Valley RWQCB has issued Waste Discharge Requirements (WDRs) to the South Kern Industrial Center; the latest version is Order No. R5-2005-0077, which was adopted in June 2005. Groundwater monitoring is conducted to evaluate the performance of facility design and operation and to identify threats to human health and the environment. Groundwater monitoring reports are sent semi-annually to the RWQCB, fulfilling the WDR requirements.

Department of Water Resources (DWR)

DWR’s major responsibilities include preparing and updating the California Water Plan to guide development and management of the State’s water resources; planning, designing, constructing, operating, and maintaining the State Water Resources Development System; regulating dams; providing flood protection; assisting in emergency management to safeguard life and property; educating the public; and serving local water needs by providing technical assistance. In addition, DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water; facilitates voluntary water transfers; and, when needed, operates a State drought water bank.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Water Code Sections 13000 et seq.), passed in 1969, requires protection of water quality by appropriate designing, sizing, and construction of erosion and sediment controls. The Porter-Cologne Act established the SWRCB and divided California into nine regions, each overseen by a RWQCB. The SWRCB is the primary State agency responsible for protecting the quality of the State’s surface and groundwater supplies and has delegated primary implementation authority to the nine RWQCBs. The Porter-Cologne Act assigns responsibility for implementing the Clean Water Act Sections 401 through 402 and 303(d) to the SWRCB and the nine RWQCBs.

The Porter-Cologne Act requires the development and periodic review of water quality control plans (basin plans) that designate beneficial uses of California’s major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters, provide the technical basis for determining waste discharge requirements, identify enforcement actions, and evaluate clean water grant proposals. The basin plans are updated every three years. Compliance with basin plans is

primarily achieved through implementation of the NPDES, which regulates waste discharges as discussed above.

The Porter-Cologne Water Quality Control Act requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, which could affect the quality of the “waters of the State,” file a report of waste discharge (ROWD). Absent a potential effect on the quality of “waters of the State,” no notification is required. However, the RWQCB encourages implementation of best management practices (BMPs) similar to those required for NPDES storm water permits to protect the water quality objectives and beneficial uses of local surface waters as provided in the Central Valley Regional Water Quality Control Plan (Basin Plan) (RWQCB, 2018).

Streambed Alteration Agreement (California Fish and Game Code)

Section 1602 of the California Fish and Game Code protects the natural flow, bed, channel, and bank of any river, stream, or lake designated by the California Department of Fish and Wildlife (CDFW) in which there is, at any time, any existing fish or wildlife resources, or benefit for the resources. Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state, and requires any person, state or local governmental agency, or public utility to notify the CDFW before beginning any activity that will:

- Substantially divert or obstruct the natural flow of any river, stream or lake;
- Substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

During final engineering and design of a project, if it is determined that any project-related actions would have the potential to necessitate a Streambed Alteration Agreement, then such an agreement would be prepared and implemented prior to construction of the project, thus maintaining compliance with Section 1602 of the California Fish and Game Code. A Streambed Alteration Agreement is required if the CDFW determines the activity could substantially adversely affect an existing fish and wildlife resource. The agreement includes measures to protect fish and wildlife resources while conducting the project. The CDFW must comply with CEQA before it may issue a final Lake or Streambed Alteration Agreement; therefore, the CDFW, acting as a responsible agency, must wait for the lead agency to fully comply with CEQA before it may sign the draft Lake or Streambed Alteration Agreement, thereby making it final.

California Water Code Section 13260

California Water Code Section 13260 requires that any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the State, other than into a community sewer system, must submit a report of waste discharge to the applicable RWQCB. Any actions related to the project that would be applicable to California Water Code Section 13260 would be reported to the appropriate RWQCB.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) was enacted by the state in 2014 and requires that by January 31, 2020, “basins that are subject to critical conditions of overdraft shall be managed under a groundwater sustainability plan.” The Act provides for the establishment of groundwater sustainability agencies (GSAs) that are meant to develop groundwater sustainability plans (GSPs) to monitor and regulate the interests of all beneficial uses and users of groundwater within each plan’s management area. The Kern County Groundwater Subbasin is considered to be in a state of critical overdraft by DWR. Prior to enactment of the SGMA, the Kern Groundwater Authority (KGA) was established to provide a framework for the active, comprehensive management of the groundwater basin underlying the valley portion of Kern County. As such, groundwater use in the Subbasin is regulated by KGA’s Groundwater Sustainability Plan. The SGMA requires that a GSP achieve “sustainable groundwater management” and avoid “undesirable results,” defined under Water Code Section 10721(w) as meaning: chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply; significant and unreasonable reduction of groundwater storage; significant and unreasonable seawater intrusion; significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies; significant and unreasonable land subsidence that substantially interferes with surface land uses; and/or surface water depletions that have significant and unreasonable adverse impacts on beneficial uses of surface water.

Senate Bill 610

SB 610 was passed on January 1, 2002, amending California law to require detailed analysis of water supply availability for large development projects. An SB 610 Water Supply Assessment (WSA) must be prepared if the following three conditions are met:

1. The project is subject to the California Environmental Quality Act (CEQA) under California Water Code Section 10910;
2. The project meets criteria to be defined as a “Project” under California Water Code Section 10912; and
3. The applicable water agency’s current Urban Water Management Plan does not account for the water supply demand associated with the project.

A project would meet the definition of “Project” per California Water Code Section 10912(a) if it is:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;

- A proposed industrial, manufacturing, or processing plant or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of the projects specified in this subdivision; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.

Local

South Kern Industrial Center Specific Plan (SKICSP)

The proposed project is within the South Kern Industrial Center (SKIC). The SKIC consists of approximately 744 acres which are planned for in the SKIC Specific Plan (SKICSP). The SKICSP is located approximately 18 miles southwest of Bakersfield and approximately 7 miles east of Taft, in unincorporated Kern County. The composting Facility was approved by Kern County under Conditional Use Permit No. 2, Map No. 158 (Existing CUP) on October 22, 2002 (Resolution No. 2002-421), along with a Supplemental Environmental Impact Report which was certified on the same date (collectively “Existing Entitlements”). Subsequent to the approvals, the Facility underwent construction and began operations in 2006. The project site is located within the SKICSP, which was most recently amended June 22, 2021 (SPA 159 Map 500). The purpose of the SKICSP is to be used as a planning tool to closely define the planning criteria of the specific plan area and to define the nature and extent of growth and to ensure orderly development. The SKICSP was designed to achieve three primary goals: implement the Kern County General Plan, establish of development standards, and guide the planned development of the SKIC.

The SKICSP contains general goals related to orderly growth and development, coordinated development with the Kern County General Plan, including measures to help ensure water quality and hydrologic resources are protected. Measures contained in the SKICSP related to hydrology and water quality include requiring drainage plans, conformance to Kern County Development Standards, ensuring improvements meet water quality standards and drainage water are properly contained and discharged. In Kern County, specific plans, such as the SKICSP, are used to implement goals, objectives, and policies of the Kern County General Plan in a more detailed and refined manner unique to a smaller area of the County. Accordingly, the applicable goals and policies, within the SKICSP, are consistent with those contained in the applicable policies, goals, and implementation measures of the Kern County General Plan. Applicable goals and policies related to hydrology and water quality are listed below:

Public Facilities and Services Element

Implementation Measures

- **Implementation Measure 13:** Drainage Plans shall conform to Kern County Development Standards.
- **Implementation Measure 16:** Individual wastewater treatment facilities shall conform to specific design requirements for land within the 100-year flood zone.

- **Implementation Measure 17:** In accordance with the Kern County Environmental Health Services Department and Regional Water Quality Control Board the developers shall maintain control of the disposal for the entire development by incorporating plans for a community system of centralized sewer treatment consisting of a collection network treatment process and disposal system.
- **Implementation Measure 28:** Prior to the issuance of any building or grading permits, a plan for the disposal of drainage waters originating on-site and from adjacent road rights-of-way shall be approved by the Kern County Department of Engineering and Surveying Services and the Kern County Planning Department, if required. Easements or grant deeds shall be given to the County of Kern for drainage purposes or access thereto, as necessary.

Environmental Resource Management Element

Goal

- **Goal 2:** To ensure that all land uses within the Specific Plan area are adequately protected from flood hazards and problems related to surface water drainage.

Implementation Measures

- **Implementation Measure 3:** Graded areas shall be revegetated by the developer immediately following completion of construction. All approved graded areas not being utilized for development or landscaping purposes shall be reseeded with native grasses or some type of soil binding material to reduce fugitive dust, pursuant to Kern County Planning Department.
- **Implementation Measure 5:** Appropriate procedures shall be identified during the site plan review process for discretionary projects in the identified Flood prone areas. Condition projects with appropriate mitigation measures to minimize the flooding potential through the design of facilities.
- **Implementation Measure 12:** On-site drainage sumps and/or basins shall be provided. The purpose of sumps and basins will be to provide retention areas for on-site run-off generated from on-site impervious areas. All drainage retention areas shall be in accordance to the requirements of the Kern County Subdivision Ordinance.
- **Implementation Measure 13:** Each individual project area development shall be responsible for the construction and maintenance of drainage facilities on-site.
- **Implementation Measure 21:** During construction and at the end of each construction workday, stockpiled materials and loaded trucks containing materials susceptible to wind entrainment of dust should be adequately watered down.

Kern County General Plan

The policies, goals, and implementation measures in the Kern County General Plan applicable to hydrology and water quality as related to the proposed project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific. Therefore, they are not listed below, but, as stated in

Chapter 2, *Introduction*, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

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

Section 1.3 Physical and Environmental Constraints

Policies

- **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 3.** Zoning and other land use controls will be used to regulate and, in some instances, to prohibit development in hazardous areas.
- **Policy 8.** Encourage the preservation of the floodplain’s flow conveyance capacity, especially in floodways, to be open space/passive recreation areas throughout the County.
- **Policy 9.** Construction of structures that impede water flow in a primary floodplain will be discouraged.
- **Policy 10.** The County will allow lands which are within flood hazard areas, other than primary floodplains, to be developed in accordance with the General Plan and Floodplain Management Ordinance, if mitigation measures are incorporated so as to ensure that the proposed development will not be hazardous within the requirements of the Safety Element (Chapter 4) of this General Plan.
- **Policy 11.** Protect and maintain watershed integrity within Kern County.

Implementation Measures

- **Implementation Measure F.** The County will comply with the Colbey-Alquist Floodplain Management Act in regulating land use within designated floodways.
- **Implementation Measure H.** Development within areas subject to flooding, as defined by the appropriate agency, will require necessary flood evaluations and studies.
- **Implementation Measure J.** Compliance with the Floodplain Management Ordinance prior to grading or improvement of land for development or the construction, expansion, conversion or substantial improvements of a structure is required.
- **Implementation Measure N.** Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.

Section 1.9 Resource

Policies

- **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.

Implementation Measures

- **Implementation Measure C.** The County Planning Department will seek review and comment from the County Engineering and Survey Services Department on the implementation of the National Pollution Discharge Elimination System for all discretionary projects.

Section 1.10 General Provisions

1.10.6 Surface Water and Groundwater

Policies

- **Policy 34.** Ensure that water quality standards are met for existing users and future development.
- **Policy 39.** Encourage the development of the County's ground water supply to sustain and ensure water quality and quantity for existing users, planned growth, and maintenance of the natural environment.
- **Policy 41.** Review development proposals to ensure adequate water is available to accommodate projected 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.
- **Policy 46.** In accordance with the Kern County Development Standards, tank truck hauling of domestic water for land developments or lots within new land developments is not permitted.

Implementation Measures

- **Implementation Measure U.** The Kern County Environmental Health Services Department will develop guidelines for the protection of groundwater quality which will include comprehensive well construction standards and the promotion of ground water protection for identified degraded watersheds.
- **Implementation Measure W.** Applications for General or Specific Plan Amendments will include sufficient data for review to facilitate desirable new development proposals consistent with General Plan policies, using the following criteria and guidelines:
 - i. The provision of adequate water, sewer, and other public services to be used.
 - ii. The provision of adequate on-site nonpublic water supply and sewage disposal if no public systems are available or used.
- **Implementation Measure X.** Encourage effective ground water resource management for the long-term benefit of the County through the following:

- i. Promote ground water recharge activities in various zone districts.
 - ii. Support for the development of Urban Water Management Plans and promote Department of Water Resources grant funding for all water providers.
 - iii. Support the development of Ground Water Management Plans.
 - iv. Support the development of future sources of additional surface water and ground water, including conjunctive use, recycled water, conservation, additional storage of surface water and ground water and desalination.
- **Implementation Measure Y.** Promote efficient water use by utilizing measures such as:
 - i. Requiring water-conserving design and equipment in new construction.
 - ii. Encouraging water-conserving landscaping and irrigation methods.
 - iii. Encouraging the retrofitting of existing development with water conserving devices.

Kern County Ordinance Title 17 - Building and Construction Ordinance

Chapter 17.28 Kern County Grading Code

Requirements of the Kern County Buildings and Construction Ordinance (Title 17 of the Kern County Code of Ordinances) would be implemented as applicable to the project. The purpose of the Building and Construction Ordinance is to promote the public safety and welfare by the adoption of minimum building standards to be required and enforced throughout unincorporated Kern County. Requirements of the Kern County Grading Code would be implemented. A grading permit would be obtained prior to commencement of construction activities.

Section 17.28.140 Erosion Control

Of particular note with respect to hydrology and water quality is Section 17.28.140, Erosion Control, which addresses the following:

1. **Slopes.** The faces of cut and fill slopes shall be prepared and maintained to control against erosion. This control may consist of effective planting. The protection for the slopes shall be installed as soon as practicable and prior to calling for final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.
2. **Other Devices.** Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety.
3. **Temporary Devices.** Temporary drainage and erosion control shall be provided as needed at the end of each workday during grading operations, such that existing drainage channels would not be blocked. Dust control shall be applied to all graded areas and materials and shall consist of applying water or another approved dust palliative for the alleviation or prevention of dust nuisance. Deposition of rocks, earth materials or debris onto adjacent property, public roads or drainage channels shall not be allowed.

Chapter 17.48 Kern County Floodplain Management Ordinance

Any construction that takes place within areas of special flood hazards, areas of flood-related erosion hazards, and areas of mudslide (i.e., mudflow) hazards within the jurisdiction of unincorporated Kern County would comply with the requirements and construction design specifications of this ordinance. Any required development permits would be obtained prior to commencement of construction activities. Sections 17.48.250 through 17.48.350 of the ordinance elaborate on the standards of construction in the special flood hazards area. The requirements of Sections 17.48.250 through 17.48.350 include standards to:

1. Address the issue of anchoring to prevent flotation, collapse or lateral movement of the structure resulting from hydrologic forces; include acceptable construction materials that are flood resistant;
2. Raise buildings within flood areas one foot above the shallow flooding depth; and
3. Ensure utilities would not interfere with flood hazard areas.

Kern County Development Standards

The Kern County Development Standards apply to all developments within Kern County that are outside of incorporated Cities. These standards establish minimum design and construction requirements that would result in improvements that are economical to maintain and would adequately serve the general public. The requirements set forth in these standards are considered minimum design standards and would require the approval of the entity that would maintain the facilities to be constructed prior to approval by Kern County.

Kern County Water Quality Control Plan

Each of the nine RWQCBs adopts a Water Quality Control Plan that recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's groundwater and surface waters, and local water quality conditions and problems. Water quality problems in the regions are listed in these plans, along with the causes, if they are known. Each RWQCB is to set water quality objectives that would ensure the reasonable protection of beneficial uses and the prevention of nuisance, with the understanding that water quality can be changed somewhat without unreasonably affecting beneficial uses. The Kern County Engineering and Survey Services Department requires the completion of an NPDES applicability form for all construction projects disturbing 1 acre or more within Kern County. This form requires the project proponent to provide background information on construction activities. Applicants must apply for the permit under one of the following four conditions:

1. All stormwater is retained on-site and no stormwater runoff, sediment, or pollutants from on-site construction activity can discharge directly or indirectly off-site or to a river, lake, stream, municipal storm drain, or off-site drainage facilities.
2. All stormwater runoff is not retained on-site, but does not discharge to a WOTUS (i.e., drains to a terminal drainage facility). Therefore, a SWPPP has been developed and BMPs must be implemented.
3. All stormwater runoff is not retained on-site, and the discharge is to a WOTUS. Therefore, a Notice of Intent (NOI) must be filed with the SWRCB prior to issuance of the building permit. Also, a SWPPP has been developed and BMPs must be implemented.

4. Construction activity is between 1 and 5 acres and an Erosivity Waiver was granted by the SWRCB. BMPs must be implemented.

4.10.4 Impacts and Mitigation Measures

Methodology

This section analyzes impacts on hydrology and water quality from the implementation of the project based on changes to the environmental setting as described above, identified drainage, water quality, and groundwater conditions at the project site, and the current regulatory framework. Impacts were evaluated based on a review of available data and information, which is summarized above, and in consideration of changes that would occur as a result of project implementation, in comparison to existing conditions.

This analysis first established baseline conditions for the affected environment relevant to hydrology and water quality, as presented above in **Section 4.10.2**, *Environmental Setting*. These baseline conditions were evaluated based on their potential to be affected by construction activities as well as operation (build out) activities for the project. The findings from these reports have been referenced for determining potential impacts of the project. The evaluation of project impacts is also based on professional judgment, analysis of Kern County's hydrology and water quality policies, and the significance criteria drawn from Appendix G of the CEQA Guidelines, which the lead agency has determined to be appropriate criteria for this EIR.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in CEQA Guidelines Appendix G, to determine if a project could potentially have a significant adverse effect on hydrology and water quality.

A project could have a significant impact on hydrology and water quality if it would:

- 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:
- d. Result in substantial erosion or siltation onsite or offsite;
- e. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
- f. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- g. Impede or redirect flood flows;

- h. Result in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation;
- i. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Please note that the environmental issue areas discussed in the IS/NOP are different from those noted above, as Appendix G of the CEQA Guidelines were revised in January 2019 and Kern County's CEQA thresholds were updated accordingly in May 2019, which was after the IS/NOP was published.

Project Impacts and Mitigation Measures

Impact 4.10-1: The project would violate water quality standards or waste discharge requirements, or otherwise degrade surface or groundwater water quality.

Construction

The proposed project includes a modification to the Facility's existing CUP to allow for an increase to the types of composting feedstocks and digestate that would be allowed, installation of new equipment for pre-processing including but not limited to grinders and electrical screens to improve efficiency and capability; increasing pile heights from 15 to 20 feet; and increasing the storage times from 7 to 180 days. To enable processing of the expanded feedstock as required by the regulations, the existing area used for composting operations could be expanded by approximately 56 acres as permitted by the existing CUP. The modification to the CUP; however, would not change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre Compost Facility permitted under the existing CUP. A full accounting of project elements is provided in **Chapter 3, Project Description**, of this EIR.

The project site is relatively flat, with essentially zero potential for runoff within the active composting area. The existing Compost Facility is surrounded by a berm and is graded to direct onsite drainage to a 2.5-acre onsite stormwater retention basin. Construction activities would include site preparation and grading, compost pad construction, equipment area pad construction, and new equipment installation, all which would allow the existing Compost Facility to utilize the entire 100-acre permitted Facility. Conventional grading would be performed as needed across the project site. However, because the project area is flat and has been graded previously, it is anticipated that grading would be limited in most areas.

The potential impacts on water quality from erosion and sedimentation would be localized and temporary during construction. Disturbance of soil during construction could result in soil erosion and subsequent water quality degradation through increased turbidity and sediment transport through runoff. The Kern County Engineering, Surveying, and Permit Services Department requires the completion of an NPDES Applicability Form for projects with construction activities that would disturb one or more acres within Kern County. Although the entire project site is already disturbed, coverage under the General Construction NPDES permit for stormwater would still be required for construction activities associated with the project. Based on County requirements and on the conditions of the General Construction NPDES permit, the applicant would be required to prepare and implement a SWPPP for the project as detailed in Mitigation Measure **MM 4.10-1** below. Compliance with the SWPPP requirements and implementation of appropriate BMPs would prevent

the discharge of sediment and polluted surface water during construction activities associated with the project. Additionally, the project is subject to all applicable Federal, State, and County water quality regulations. This includes, but is not limited to, required adherence to the CWA, NPDES requirements, the National Flood Insurance Act, the California Fish and Game Code, the California Water Code, the *Kern County General Plan*, the SKICSP, and the Kern County Zoning Ordinance. Further, the project would comply with **MM 4.7-2** (see **Section 4.7, *Geology and Soils*** for the full text), which would require preparation of a Soil Erosion and Sedimentation Control Plan to mitigate potential loss of soil and erosion due to project implementation. Construction-related erosion and sedimentation impacts as a result of soil disturbance would be less than significant following implementation of Mitigation Measure **MM 4.10-1**.

During project construction, activities that have the potential to result in the accidental release of hazardous or potentially hazardous materials could result in water quality degradation. These materials would include but not be limited to: diesel fuel, gasoline, lubricant oils, hydraulic fluid, antifreeze, transmission fluid, lubricant grease, cement slurry, and other fluids utilized by construction and maintenance vehicles and equipment. Motorized equipment could leak hazardous materials such as motor oil, transmission fluid, or antifreeze due to inadequate or improper maintenance, unnoticed or unrepaired damage, improper refueling, or operator error.

As noted in **Section 4.9, *Hazards and Hazardous Materials***, of this EIR, Mitigation Measure **MM 4.9-1** would require the project proponent update the existing Hazardous Materials Business Plan for the Facility. The Hazardous Materials Business Plan requires contractors to delineate hazardous material and hazardous waste storage areas; describe proper handling, storage, transport, and disposal techniques; describe methods to be used to avoid spills and minimize impacts in the event of a spill; describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction; and establish public and agency notification procedures for spills and other emergencies, including fires. Applicable plans would be provided to all contractors working on the project and would ensure that potential construction impacts to water quality associated with handling of hazardous materials is less than significant.

Operation

Operation of the proposed Composting Facility would require limited use of certain hazardous materials for routine daily operations and maintenance. Accidental release of such materials could include fuels, paints, coatings, lubricants, hydraulic oil, and similar liquids, which would result in water quality degradation if the materials were to become entrained in stormwater. This could occur as a result of accidental releases at buildings and maintenance areas, equipment or fuel/hazardous material storage areas, the mulch coloring machine, or via accidental releases from the fuel truck or fueling operations. This would result in a potentially significant impact on water quality.

The existing Facility operates under a hazardous materials business plan (HMBP) on-file with the Kern County Environmental Health Services Division/Hazardous Materials Section. The HMBP includes a complete list of all materials used on-site and information regarding how the materials are transported and in what form they would be used. This information has been recorded to maintain safety and prevent possible environmental contamination or worker exposure. If operation of the new processing and grinding equipment includes materials would require the use of materials or require potentially hazardous maintenance protocols not already identified in the HMBP, it would be updated

and filed with the County. However, implementation of Mitigation Measure **MM 4.9-1**, from **Section 4.9, Hazards and Hazardous Materials**, would require the project proponent to update the existing Hazardous Materials Business Plan, which would minimize this impact by ensuring safe handling of hazardous materials on site, and providing for spill response measures in the event of an accidental release.

The Facility currently captures all stormwater and processes water through an existing drainage system. Stormwater from the active composting area would continue to be managed entirely on site with the existing drainage system and in accordance with RWQCB requirements. Stormwater runoff generated from the proposed project site would be collected onsite and drained to the existing stormwater conveyance system. No new construction of storm water drainage facilities either on-site or off-site are proposed. However, unless all existing stormwater facilities are carefully managed and maintained, backup of stormwater in unintended areas of the project site could occur, and/or ponded stormwater could come into contact with composting feedstock storage areas or other portions of the site, including outside of the berms, that could result in stormwater quality degradation. Therefore, implementation of Mitigation Measure **MM 4.10-1**, which would require implementation of a comprehensive stormwater management plan, and Mitigation Measure **MM 4.10-2**, which would implement good housekeeping techniques, would be required to protect water quality and downstream beneficial use.

Wastewater biosolids also constitute a potential source of water quality contamination. In the event that stormwater was to contact wastewater biosolids and then be discharged to natural waters, water quality degradation could occur. However, as discussed previously, all composting operations, including feedstock handling, would occur within an area of the site where stormwater would be contained on site, with no offsite discharge. As a result, even during a major, 100-year, 24-hour storm event, and with the implementation of Mitigation Measures **MM 4.9-1**, **MM 4.10-1**, and **MM 4.10-2**, potential impacts on water quality associated with the management of stormwater during operations would be minimized, and potential impacts would be reduced to less than significant. Further, as identified in **MM 4.10-1**, the applicant shall apply for and receive approval from the Regional Water Quality Control Board for the proposed project through issuance of revised site-specific WDRs or confirmation of coverage under the General Order. Site-specific WDRs would include discharge requirements and monitoring methods to ensure project compliance.

The project site does not contain any streams, open bodies of water, or wetlands, and the project site does not include any small distributary channels that are common on alluvial fans in the desert. Contamination and degradation of surface water can occur from direct or indirect contact with potentially harmful or hazardous materials. A direct impact would involve the release of a potentially harmful or hazardous material into a body of water. An accidental release of a potentially harmful or hazardous material into a dry stream bed or wash would not directly impact water quality, but could indirectly impact water quality through runoff during a subsequent storm event.

The proposed project would be required to update the Facility's existing HMBP, including the Spill Prevention Control and Countermeasure (SPCC) plan, which details procedures to both minimize the potential for, and reduce the effects of any material spill. The requirement to update the HMBP is contained in Mitigation Measure **MM 4.9-1**, as further discussed in **Section 4.9 Hazards and Hazardous Materials**. Therefore, with the implementation of the listed mitigation measures,

impacts associated with the violation of water quality standards or discharges from these types of pollutants would be less than significant.

Engineering and design plans for the proposed project would be required to comply with the most recent requirements of the Kern County Code of Building Regulations. Prior to the commencement of construction activities, the proposed project would be required to submit an updated drainage plan to the Kern County Public Works Department that would include post-construction structural and non-structural BMPs. Routine structural BMPs are intended to address water quality impacts related to drainage that are inherent in development; however, these need not be related to any identified water quality problem. Examples of routine structural BMPs include filtration, runoff-minimizing landscape for common areas, energy dissipaters, inlet trash racks, and water quality inlets. Therefore, long-term impacts on drainage patterns across the project site that could result in substantial erosion and siltation on- or off-site would be reduced to less than significant after implementation of Mitigation Measure **MM 4.10-1** and **MM 4.10-2**.

To further reduce the potential for hazardous materials to be released to waters, the proposed project would be required to adhere to the water quality standards and prohibitions of the basin plan. Conformance to this requirement and implementation of BMPs to minimize the generation of pollutants and their transport into receiving waters, as well as to minimization of overall stormwater generation would reduce these related potential water quality impacts to less than significant.

Sanitary wastewater generated from the Facility is treated by an existing septic system and is in place to continue to treat wastewater. A sewage treatment plant was included as a part of the SKICSP, but it has not yet been constructed. No new construction related to sanitary wastewater treatment facilities or infrastructure is proposed. Thus, wastewater generated from the Facility would not result in a violation of waste discharge requirements. Impacts are less than significant in this regard.

Mitigation Measures

Implement Mitigation Measure **MM 4.10-1** and **MM 4.10-2**, as described above, Mitigation Measure **MM 4.9-1**, from **Section 4.9, Hazardous and Hazardous Materials** and **MM 4.7-2**, from **Section 4.7, Geology and Soils**.

MM 4.10-1: The Applicant shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) as required under the General Construction Permit for Discharges of Storm Water Associated with Construction Activities, for all construction phases of the project. The SWPPP shall identify pollutant sources that may affect the quality of stormwater discharge and shall require the implementation of best management practices (BMPs) to reduce pollutants in stormwater discharges. BMPs include temporary erosion control measures (such as fiber rolls, staked straw bales), landscaping, and sediment basins. Applicant shall apply for and receive approval from the Regional Water Quality Control Board for the proposed project through issuance of revised site-specific waste discharge requirements (WDRs) or confirmation of coverage under the General Order.

MM 4.10-2: During operations, the applicant shall deploy good housekeeping measures to minimize stormwater contact with feedstock or compost. Specific actions shall include maintaining areas between compost piles, areas used for feedstock management, on-haul and off-haul areas, and other areas of the project site free of compost and compost feedstock.

Level of Significance after Mitigation

With Implementation of Mitigation Measures **MM 4.10-1, MM 4.10-2, MM 4.9-1 and MM 4.7-2**, impacts would be less than significant with mitigation.

Impact 4.10-2: The project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

The proposed project would result in an impact to groundwater supplies if construction or operation activities require a substantial supply of local groundwater resources or alter existing groundwater recharge, such as through the creation of substantial new impermeable areas. The project site is underlain by the Kern County Subbasin within the Tulare Lake Hydrologic Region. The existing composting facility has been constructed to capture all process water and Stormwater. The existing composting facility has engineered working surfaces, meeting the RWQCB requirements, to prevent the infiltration of water, thus protecting groundwater. The onsite process water retention basin includes a liner system to prevent the infiltration of water and provides a surface designed to maintain the area. The stormwater swales located onsite manage non-contact stormwater and allow infiltration to occur through seeded topsoil. These systems would be maintained through expanded operations. Impacts would be less than significant.

Potable water and water used at the Facility is supplied by groundwater from private wells. The existing infrastructure is in place to supply the proposed project with water needed for both potable water for employees as well as water needed to facilitate the composting process. The project site is an existing Composting Facility. While the types of compostable materials accepted at the Facility would be modified and the existing area used for composting operations could be expanded by approximately 56 acres as permitted by the existing CUP, the modification to the CUP would not change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre Composting Facility permitted under the existing CUP. Thus, the proposed project impacts would be less than significant in this regard.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Impact 4.10-3: The project would 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 result in a substantial erosion or siltation on- or off-site; substantially increase the rate of amount of surface runoff in a manner which would result in flooding on or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater

drainage systems or provide substantial additional sources of polluted runoff; or impeded or redirect flood flows.

The rate and amount of surface runoff is determined by multiple factors including topography, the amount and intensity of precipitation, the amount of evaporation that occurs in the watershed, and the amount of water that infiltrates the ground. There are no drainages, wetlands or bodies of water located on the site with the exception of the 2.5-acre man-made stormwater basin, thus the proposed project would not modify the course of any river or stream.

The project site is generally flat, and the proposed project would not substantially alter the existing drainage patterns. As discussed previously, the project would include limited earthwork for the installation and operation of upgraded composting facilities onsite, including relocation and extension of the approved flood control berm with perimeter fencing, resulting in minimal erosion or siltation on- or off-site.

However, there is a potential for impacts related to surface runoff, erosion, and siltation to occur during construction. Such potential impacts would be localized and temporary in nature. In accordance with Mitigation Measure **MM 4.7-1** (see **Section 4.7, *Geology and Soils***) the project would limit grading to the minimum area necessary for construction and final grading earthwork would be approved by the Kern County Public Works prior to the initiation of grading. As identified in Mitigation Measure **MM 4.7-2**, the project proponent would prepare a Soil Erosion and Sedimentation Control Plan to mitigate potential loss of soil and erosion due to project implementation. Further, the proposed project would be required to obtain coverage under the NPDES General Construction Permit, Order No. 2009-0009-DWQ, because the proposed project would result in one or more acres of land disturbance. To conform to the requirements of the NPDES General Permit, a SWPPP would be prepared and would specify BMPs to prevent construction pollutants, including eroded soils (such as topsoil), from moving off-site. Conformance to requirements of the NPDES permit and implementation of BMPs would reduce the potential for erosion of soils or siltation during construction activities. Accordingly, Construction-related erosion and sedimentation impacts as a result of soil disturbance would be less than significant following implementation of a SWPPP and BMPs (Mitigation Measures **MM 4.10-1** and **MM 4.10-2**).

Operation of the proposed project would not substantially alter the existing drainage patterns, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-site or off-site. With the implementation of Mitigation Measure **MM 4.10-1** and **MM 4.10-2**, impacts would be reduced to less than significant.

Mitigation Measures

Implement Mitigation Measures **MM 4.10-1** and **MM4.10-2**, as described above and Mitigation Measures **MM 4.7-1** and **MM 4.7-2** as described in **Section 4.7, *Geology and Soils***.

Level of Significance after Mitigation

Impacts would be less than significant with mitigation.

Impact 4.10-4: The project would result in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

The nearest body of water to the project site is the catfish farm approximately 1.5 miles northeast of the project site. The California Aqueduct is approximately 3.5 miles south of the site. No oceans, lakes, or partially closed standing body of water are found near the project site. Therefore, the proposed project is not within a zone with risk of seiche or tsunami. Further, the SWPPP for the proposed project would limit pollution rates from stormwater conveyance. The application of stormwater plans in the SWPPP as well as the minimal flood risk of the area would result in a less than significant environmental impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Impact 4.10-5: The project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

As described in Impact 4.10-1, the project would not conflict with or obstruct a water quality control plan. Further, the project does not propose the creation of substantial new impermeable areas or other construction or operation activities that would require a substantial supply of local groundwater resources or alter existing groundwater recharge. The project is within the Kern County Groundwater Subbasin, which is considered to be in a state of critical overdraft by DWR. The project does not propose the construction of structures on the project site that would inhibit water infiltration and would comply with the KGA's Groundwater Sustainability Plan. Therefore, the proposed project would not significantly impact local groundwater recharge or impede sustainable groundwater management of the basin. Impacts would be less than significant, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts and Mitigation Measures

As described in **Chapter 3, Project Description**, of this EIR, multiple projects are proposed in the vicinity of the project that are included in the cumulative analysis presented here. The general cumulative setting for surface water quality includes the San Joaquin River and Tulare Lake Hydrologic Regions, described above, while the setting for groundwater impacts includes the area overlying the groundwater Subbasin, as described previously. The geographic scope used to identify projects listed in **Table 3-3, Cumulative Projects List**, is a somewhat smaller geographic scope than these areas, but this smaller area includes Bakersfield and surrounding communities, where

development is of the highest density and therefore conservatively representative of the hydrological unit and Subbasin as a whole.

As discussed above, the project would be required to implement a SWPPP and associated BMPs to minimize potential for release of pollutants and sediment into surface water. Other cumulative scenario projects would be required to implement similar measures as a part of the CEQA and permitting review process. Therefore, cumulative scenario impacts associated with water quality degradation would not be cumulatively considerable, and the project would not contribute to a cumulative impact on water quality.

With respect to erosion, drainage, and flooding, the project would have a less than significant impact, and drainage related impacts from cumulative scenario projects would be primarily localized. Therefore, cumulative scenario impacts on erosion, drainage, and flooding are not anticipated to be cumulatively considerable, and the project would not contribute to a cumulative impact on flooding, erosion, or drainage.

Mitigation Measures

Implement Mitigation Measures **MM 4.10-1** and **MM 4.10-2**, as described above, Mitigation Measures **MM 4.7-1** and **MM 4.7-2** as described in **Section 4.7, *Geology and Soils***, and Mitigation Measures **MM 4.9-1** and **MM 4.9-2**, and as described in the **Section 4.9, *Hazards and Hazardous Materials***.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.9-1**, **MM 4.7-1**, **MM 4.7-2**, **MM 4.10-1** and **MM 4.10-2**, Cumulative impacts would be less than significant.

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Section 4.11 Land Use and Planning

4.11.1 Introduction

This section of the Environmental Impact Report (EIR) describes the affected environment and regulatory setting of the Synagro South Kern Compost Manufacturing Facility (proposed project) for impacts that may affect land use and planning. It also describes the environmental and regulatory setting and discusses the need for mitigation measures where applicable. The information in this section is based primarily, but not exclusively, on a review of the Kern County General Plan, South Kern Industrial Complex Specific Plan, and the Kern County Zoning Ordinance.

4.11.2 Environmental Setting

As described in **Chapter 3, Project Description**, the project site is an existing composting facility located at 2653 Santiago Road in the western region of unincorporated Kern County, California. The composting facility operates under existing Conditional Use Permit (CUP) No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421). Composting activities occur on 44 acres of an overall 155-acre project parcel (assessor parcel number 220-110-70). The proposed modifications to the currently approved CUP 2, Map No. 158 are only for the 100-acre area already used for composting and the balance of the site would remain undeveloped and in its current condition. The project site is located approximately 7 miles east of the City of Taft. The unincorporated communities of Taft Heights and Ford City are located adjacent to the south and north of the City of Taft, and are located approximately 12 miles to the west. The unincorporated communities of Dustin Acres and Valley Acres are located approximately 10 miles northwest of the project site along State Route (SR-119).

On-Site Land Use

The project site is located within the Southern Kern Industrial Center Specific Plan (SKICSP), which includes a total of 744 acres. The SKICSP is the primary growth and development implementation plan/tool for the area and is intended to provide for the orderly industrial development of the plan area and address particular issues and concerns unique to the area and sites within it such as the proposed project. The proposed project and relationship to the SKICSP is described in additional detail in **Section 4.11.3, Regulatory Setting**, below.

The existing CUP for the Synagro South Kern Compost Manufacturing Facility is composed of 100-acres within an approximate 155-acre parcel within the SKICSP. The area is used for existing composting operations is approximately 44-acres. The project site is accessed via Santiago Road and primary access is on the northerly side of the parcel. The northerly portion of the Composting Facility contains five structures, a parking lot, and an approximate 2.5-acre stormwater/process water pond. The remainder of the site is heavily disturbed and is accessed via interior unpaved dirt roads. There are conveyors, lifts, machinery, vehicles used to transport compost, and materials, and rows of composting piles.

The proposed project does not include construction of a new facility but instead would permit the existing facility to receive and process additional feedstocks consistent with new state recycling laws. The existing facility is permitted at 100 acres in size, on which approximately 44 acres are currently developed, and 56 acres is undeveloped. As discussed, the construction of the undeveloped 56 acres would occur within the previously permitted 100 acres of the 155-acre parcel. This 56-acre area is routinely mowed or disked to control weeds and as vegetation control leaving much of the area devoid of vegetative cover. Overall the project site and immediately surrounding area is heavily disturbed.

The existing compost facility includes perimeter fencing with a gated entrance, scale(s), internal access roads, maintenance area including on-site truck wash area, administration building space, receiving building, mixing equipment area, compost additive temporary storage area and finished product area. The facility currently operates, and is proposed to continue operating, 24 hours per day, 7 days per week. The existing parcel is occupied by areas used for composting operations.

Existing on-site buildings and structures within the project site consist of office, storage space, and receiving building for composting materials. All buildings are one story in height. Other visual elements within the composting facility consist of equipment, conveyors, machinery, and composting piles that are currently permitted to be a maximum of 15 feet in height per Conditional Use Permit No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421). **Figure 3-1**, *Regional Location and Site Map*, shows the access to the project site and the proposed project regional, local and site settings and **Figure 3-2**, *Existing Site Use Map*, in **Chapter 3**, *Project Description*, shows the existing site uses. These elements are discussed in additional detail below.

Surrounding Land Use

Land uses immediately surrounding the project site include solar installations to the west, south and east. A petroleum oil refinery with three tanks and petroleum piping is located to the north across Santiago Road. The solar installations encompass a total of approximately 216 acres, and the petroleum oil refinery occupies a total site footprint of approximately 80 acres. Northwest of the project site, along South Lake Road is a railroad spur that ends approximately 1 mile southwest of the project site. The railroad extends to the north where it serves a second petroleum facility approximately one mile to the north. Other uses surrounding the project site include, Hughes Rocket Booster Testing Facility, Baker Petrolite Chemical Plant, a car cleaning facility, and Boswell Cotton Gin also sit approximately 1 mile to the north of the project site just outside the SKICSP.

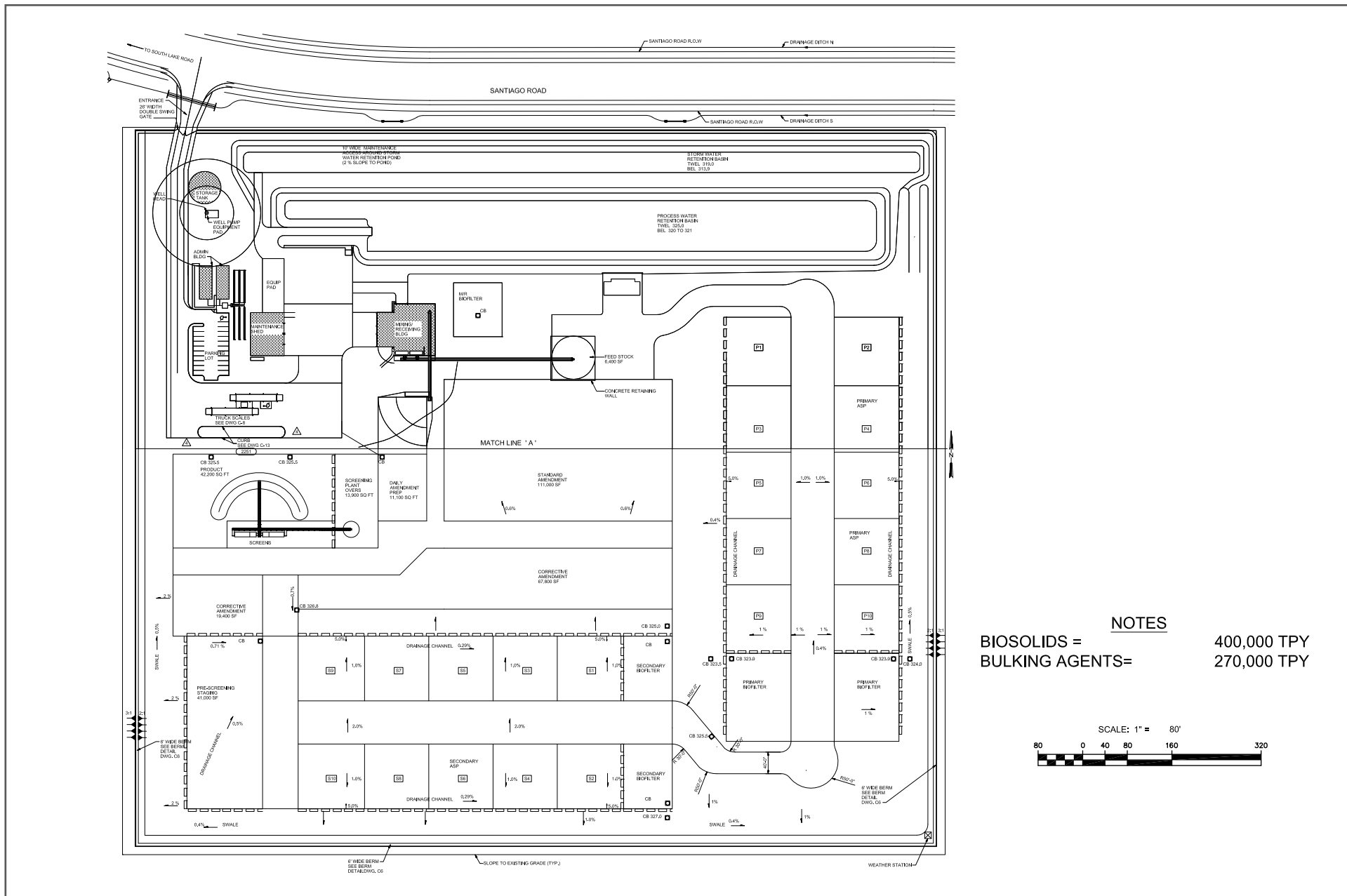
The following table, **Table 4.11-1**, *On-Site and Surrounding Land Uses*, provides a description of the land uses for the properties adjacent to the site: **Table 4.11-2**, *Land Use Designation and Zoning Designations* shows the Kern County General Plan designations and zoning of the project site and surrounding areas. **Figure 4.11-1**, *On-Site and Surrounding Land Uses*, shows the designations in a graphic on the subsequent page.

Table 4.11-1: On-Site and Surrounding Land Uses

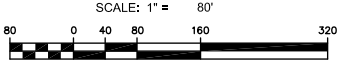
Location	Land Use / Kern County General Plan and Zoning Ordinance
On-Site	3.4/2.5 (Solid Waste/Flood Hazard) and 7.3/2.5 (Industrial/Flood Hazard).
North	Oil and Gas facility (7.3/2.5 Industrial/Flood Hazard).
East	Vacant/Agriculture/Solar installation (7.3/2.5).
South	Vacant/Agriculture/Solar installation (7.3/2.5).
West	Solar installation (7.3/2.5).

Table 4.11-2: Land Use Designation and Zoning Designations

	<i>Existing Land Use</i>	<i>Existing Land Use Designations</i>		<i>Existing Zoning</i>	
		<i>Map Code Designations within SKICSP</i>	<i>Map Code Designations immediately adjacent, but outside of the SKICSP</i>	<i>Classifications within SKICSP</i>	<i>Classifications immediately adjacent, but outside of the SKICSP</i>
Project Site	Developed with compost Facility and vacant land	3.4/2.5 (Solid Waste Facilities/Flood Hazard)	Not Applicable	South Kern Industrial Specific Plan (SP)	Not Applicable
North	Oil refinery	7.3/2.5 (Heavy Industrial/Flood Hazard) 3.3/2.5 (Other Facilities/Flood Hazard) 8.4/2.5 (Mineral and Petroleum/Flood Hazard)	8.3/2.5 (Extensive Agriculture/Flood Hazard) 8.1 (Intensive Agriculture) 8.1/2.5 (Intensive Agriculture/Flood Hazard) 8.1/2.3 (Intensive Agriculture/Shallow Groundwater) 7.3/2.5 (Heavy Industrial/Flood Hazard)	South Kern Industrial Specific Plan (SP) M-3 PD FPS (Heavy Industrial Precise Development Floodplain Secondary Combining District)	M-3 PD FPS (Heavy Industrial Precise Development Floodplain Secondary Combining District) A (Exclusive Agriculture) A FPS - Exclusive Agriculture Floodplain Secondary Combining District
South	Solar facility	7.3 (Heavy Industrial); 2.5 (Flood Hazard);	8.1/2.5 (Intensive Agriculture/Flood Hazard)	South Kern Industrial Specific Plan (SP) A - Exclusive Agriculture	South Kern Industrial Specific Plan (SP) A - Exclusive Agriculture
East	Solar facility	7.3 (Heavy Industrial); 2.5 (Flood Hazard);	8.1/2.5 (Intensive Agriculture/Flood Hazard), and 8.3/2.5 (Extensive Agriculture/Flood Hazard)	South Kern Industrial Specific Plan (SP) A - Exclusive Agriculture	South Kern Industrial Specific Plan (SP) A - Exclusive Agriculture
West	Solar facility	7.3 (Heavy Industrial); 2.5 (Flood Hazard);	8.1/2.5 (Intensive Agriculture/Flood Hazard) 8.5/2.6 (Resource Management/Flood Hazard) 8.3/2.5 (Extensive Agriculture/Flood Hazard)	South Kern Industrial Specific Plan (SP) A- Exclusive Agriculture	South Kern Industrial Specific Plan (SP) A- Exclusive Agriculture



NOTES
 BIOSOLIDS = 400,000 TPY
 BULKING AGENTS = 270,000 TPY



SOURCE: Total Compliance Management, 2018



On-Site and Surrounding Uses

Figure 4.11-1

4.11.3 Regulatory Setting

Federal

There are no applicable federal regulations for this issue area.

State

CalRecycle

State regulations pertaining to composting material handling facilities and operations are required to comply with the state standards set forth in Title 14 California Code of Regulations, Division 7, Chapter 3.1, Articles 5, 6, 7, 8, and 9. These activities are overseen by CalRecycle, which, until 2010 was known as the California Integrated Waste Management Board (CIWMB), when the functions were taken over by CalRecycle.

These documents provide guidance and set forth regulations and requirements pertaining to the handling and disposal of solid waste including composting materials and composting sites. More specifically, **Chapter 3.1** *Compostable Materials Handling Operations and Facilities Regulatory Requirements*, would be directly applicable to the proposed project. The chapter was adopted pursuant to and for the purpose of implementing the California Integrated Waste Management Act (CIWMA) of 1989 (Act) and implements those provisions of the Act relating to composting and establishes standards and regulatory requirements for composting resulting of materials, including but not limited to feedstock, compost, or chipped and ground materials (CCR, 2021).

The balance of the chapter discusses the regulation tiers for composting operations and facilities and sets forth the requirements for composting of various materials including agricultural, green materials, vegetative food materials, and biosolids. This Chapter also discusses permitting requirements and terms and conditions, facility locations and design standards, such as permitted materials, odor control, minimizing nuisances, operating standards, environmental health standards, operation and facility records, and site restoration. These individual elements are discussed in the individual Chapters of this Draft EIR as applicable.

Public Resources Code Section 50000

CalRecycle is required to ensure that regulations contained in the Public Resources Code (PRC) are followed and to ensure that waste management facilities under its jurisdiction also follow applicable rules and regulations within the PRC. Among these is PRC Section (§) 50000, which pertains to licensing and expansion of solid waste facilities. More specifically, this section states, that until an integrated waste management plan has been approved by the CalRecycle pursuant to Division 30 (commencing with Section 40000), no person shall establish a new solid waste facility or transformation facility or expand an existing solid waste facility or transformation facility that will result in a significant increase in the amount of solid waste handled at the facility without a certification by the enforcement agency until certain criteria are met.

Land use and planning decisions within and adjacent to the project site are guided and regulated by the Kern County General Plan and Kern County Zoning Ordinance. The Kern County General Plan

contains goals, objectives, and policies and provides an overall foundation for establishing land use patterns. For this land use impact analysis, this section lists all relevant goals, objectives, policies, and implementation measures related to the proposed project. The Zoning Ordinance contains regulations through which the General Plan's provisions are implemented. Regarding uses in the project area, land use and planning is guided by the SKIC Specific Plan (SKICSP). The relevant planning documents are discussed in additional detail below.

Regional

Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

The latest Regional Transportation Plan (RTP) for Kern County identifies future transportation improvements needed to serve the projected transportation needs of the County. The RTP details the existing transportation systems; sets goals, policies and projects; and identifies funding mechanisms for these projects. Transportation projects identified in the RTP include highway, street, and roadway projects; mass transportation; railroad; and other programs and projects related to the transportation needs of the County. It was prepared by the Kern Council of Governments (COG) and was adopted in August 16, 2018. The 2018 RTP is a 20-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It was developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between local, regional, State, and federal agencies. New to the 2018 RTP, California's Sustainable Communities and Climate Protection Act, or Senate Bill (SB) 375, calls for the Kern RTP to include a Sustainable Communities Strategy (SCS) that reduces greenhouse gas (GHG) emissions from passenger vehicles and light-duty trucks by 5 percent per capita by 2020 and 10 percent per capita by 2035 as compared to 2005. In addition, SB 375 provides for closer integration of the RTP/SCS with the Regional Housing Needs Allocation (RHNA) ensuring consistency between low income housing needs and transportation planning.

The intent of the SCS is to achieve the State's emissions reduction targets for automobiles and light trucks. The SCS will also provide opportunities for a stronger economy, healthier environment, and safer quality of life for community members in Kern County. The RTP/SCS seeks to: improve economic vitality; improve air quality; improve the health of communities; improve transportation and public safety; promote the conservation of natural resources and undeveloped land; increase access to community services; increase regional and local energy independence; and increase opportunities to help shape our community's future.

The 2018 RTP/SCS financial plan identifies how much money is available to support the region's transportation investments. The plan includes a core revenue forecast of existing local, State, and federal sources along with funding sources that are considered to be reasonably available over the time horizon of the RTP/SCS. These new sources include adjustments to State and federal gas tax rates based on historical trends and recommendations from two national commissions (National Surface Transportation Policy and Revenue Study Commission and National Surface Transportation Infrastructure Financing Commission), leveraging of local sales tax measures, local transportation impact fees, potential national freight program/freight fees, future State bonding programs, and mileage based user fees (Kern COG, 2018).

Local

Kern County General Plan

The *Kern County General Plan* is a policy document designed to provide long-range guidance for planning decisions that affect the growth and resources of unincorporated Kern County. Included in the *Kern County General Plan* is the *Land Use, Open Space, and Conservation Element*, which provides for a variety of land uses for future economic growth while also assuring the conservation of Kern County's agricultural, natural, and resource attributes. Within the *Land Use, Open Space and Conservation Element*, policy areas are separated by overlay designations, known as "Map Codes", which are identified on the *Kern County General Plan* maps for each section of the County and include the following categories: (1) non-jurisdictional land (state and federal); (2) environmental constraints overlay; (3) public facilities; (4) non-jurisdictional land (accepted county plan areas, rural communities and specific plan required); (5) residential; (6) commercial; (7) industrial; and (8) resource. Those that are applicable to the proposed project are listed below as the land use designations, goals, policies, and implementation measures within SKICSP mirror those of the existing Kern County General Plan.

The proposed project site is appropriately designated as Map Code is 3.4/2.5 (Solid Waste Facility/Flood Hazard), which are defined according to the General Plan in additional detail as follows:

Map Codes

- **Map Code 3.4 (Solid Waste Disposal Facility)** – Existing or planned public, semi-public, or private municipal solid waste facilities, organic waste disposal facilities, and segregated waste stream disposal facilities.
- **Map Code 2.5 (Flood Hazard)** – Special Flood Hazard Areas (Zone A), as identified on the Flood Insurance Rate Maps (FIRM) of the Federal Emergency Management Agency (FEMA) and supplemented by floodplain delineating maps that have been approved by the Kern County Engineering and Survey Services Department.

In addition to the *Land Use, Open Space, and Conservation Element*, the *Kern County General Plan* includes other elements related to circulation, noise, safety, and energy. Each element establishes goals, policies, and implementation measures that guide planning decisions in unincorporated Kern County. The goals, policies, and implementation measures relevant to the project are listed below.

Chapter 1 Land Use, Open Space, and Conservation Element

Goal

- **Goal 1:** Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

Section 1.2 Non Jurisdictional Land

Goal

- **Goal 1:** To promote harmonious and mutually beneficial uses of land among the various jurisdiction and land management entities present in Kern County.

Implementation Measure

- **Implementation Measure E:** Seek Memorandums of Understanding with other governmental entities when the land use proposed requires a discretionary application or coordination through the County planning Agency as required by State or federal law. These applications include permit(s) subject to the Surface Mine and Reclamation Act (SMARA).

Section 1.3 Physical and Environmental Constraints

Goal

- **Goal 1:** To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.

Policies

- **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 2:** In order to minimize risk to Kern County residents and their property, new development will not be permitted in hazard areas in the absence of implementing ordinances and programs. These ordinances will establish conditions, criteria and standards for the approval of development in hazard areas.
- **Policy 3:** Zoning and other land use controls will be used to regulate and, in some instances, to prohibit development in hazardous areas.
- **Policy 8:** Encourage the preservation of the floodplain's flow conveyance capacity, especially in floodways, to be open space/passive recreation areas throughout the County.
- **Policy 9:** Construction of structures that impede water flow in a primary floodplain will be discouraged.
- **Policy 10:** The County will allow lands which are within flood hazard areas, other than primary floodplains, to be developed in accordance with the General Plan and Floodplain Management Ordinance, if mitigation measures are incorporated so as to ensure that the proposed development will not be hazardous within the requirements of the Safety Element (Chapter 4) of this General Plan.
- **Policy 11:** Protect and maintain watershed integrity within Kern County.

Implementation Measure

- **Implementation Measure H:** Development within areas subject to flooding, as defined by the appropriate agency, will require necessary flood evaluations and studies.

Section 1.4 Public Facilities and Services

Map Code

- **Map Code 3.7 (Other Waste Facilities):** Non-hazardous waste facilities which manage and process various types of waste materials but do not have on-site disposal. Examples include but are not limited to large and medium volume transfer facilities; materials recovery facilities; composting facilities (green waste and biosolids); wood waste (chipping and grinding facilities); tire recycling; soil remediation; transformation facilities; ash operations and facilities as defined in §17376 of Title 14; and construction and demolition recycling (see Appendix F).

Goal

- **Goal 1:** Kern County residents and businesses should receive adequate and cost-effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.
- **Goal 9:** Serve the needs of industry and Kern County residents in a way that does not degrade the water supply and the environment and protect public health and safety by avoiding surface and subsurface nuisances resulting from the disposal of hazardous wastes, irrespective of the geographic origin of the waste.

Policies

- **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 2:** The efficient and cost-effective delivery of public services and facilities will be promoted by designating areas for urban development which occur within or adjacent to areas with adequate public service and facility capacity.
- **Policy 3:** Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.
- **Policy 6:** The County will ensure adequate fire protection to all Kern County residents.
- **Policy 7:** The County will ensure adequate police protection to all Kern County residents.
- **Policy 9:** Applicants for all solid waste disposal facilities (Map Code 3.4) and other waste facilities (Map Code 3.7) shall submit closure plans and financial assurance estimates to guarantee closure in conjunction with approval of the required conditional use permit. The requirement for financial assurances may also be satisfied if a State or federal agency will have lead permit responsibility for approval or operational oversight of the facility and which also will require the posting of financial assurances to guarantee site closure. In conjunction with the financial assurances filed with the County, applicants shall enter into a contract with the County to guarantee site closure.

- **Policy 10:** Ensure landfill capacity for Kern County residents and industries.
- **Policy 11:** A solid waste disposal facility (Map Code 3.4) and other waste facilities (Map Code 3.7) shall pay its pro-rata share of upgrading pertinent County roads.
- **Policy 12:** For solid waste disposal facilities, all necessary permits shall be obtained from the Kern County Environmental Health Services Department, Kern County Waste Management Department, State of California Integrated Waste Management Board, State of California Regional Water Quality Control Board, the appropriate Air Pollution Control District, and all other responsible agencies prior to the commencement of operations.
- **Policy 13:** The County shall ensure landfill capacity for the residents and industry of Kern County.
- **Policy 15:** All other waste facilities (non-hazardous/non-disposal) shall designate a buffer around the permitted waste area as defined by the 3.7 land use designation.

Implementation Measures

- **Implementation Measure C:** Project developers shall coordinate with the local utility service providers to supply adequate public utility services.
- **Implementation Measure D:** Involve utility providers in the land use and zoning review process.
- **Implementation Measure L:** Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in the County shall not be approved unless adequate fire protection facilities and resources can be provided.
- **Implementation Measure M:** Conditional use permits shall be required for solid waste facilities to establish the standards and conditions necessary to protect the public's health and safety and to protect characteristics associated with diverse communities and regions of Kern County.
- **Implementation Measure Y:** Each adopted site for Other Waste Facilities (Map Code 3.7) shall be depicted on the General Plan map, and on a map in Appendix F delineating the boundaries of the facility, and existing permanent dwelling units within 200 foot of the facility's boundary or 660 foot for a commercial organic compost and transformation facilities. Modifications to the permitted waste area of another Waste Facilities shall require a General Plan Amendment to a Map Code 3.7 for the expansion area and shall simultaneously amend the Map Code 3.7.1 (Other Waste Facilities Buffer) boundary to maintain the required buffer area from the permitted waste area. The General Plan Amendment process shall include amending the facilities map in Appendix F.
- **Implementation Measure AA:** Other waste facilities approved prior to adoption of this General Plan shall strive to have a 200-foot buffer around the permitted disposal area as defined by the 3.7 land use designation. Land, which is not owned by the other waste facility and is within 200-foot of a permitted disposal facility, shall include a Map Code 2.10 (Nearby Waste Facility) combining land use designation, except for commercial organic compost and transformation facilities which require a 660-foot designated buffer.

- **Implementation Measure BB:** The uses, which are allowed within the Map Code 3.7.1 (Other Waste Facility Buffer) land use designation, shall be listed within the approved conditional use permit or as provided by the appropriate permit.

Section 1.8 Industrial

Map Code

- **Map Code 7.3 (Heavy Industrial):** Large-scale industrial activities that are incompatible with other land uses because of potential severe environmental impacts and/or high employee densities. Uses shall include, but are not limited to, the following: Manufacturing, assembling and processing activities, transportation facilities, material and equipment storage, sawmills, foundries, refineries, and petroleum product storage.

Goals

- **Goal 1:** Ensure that an adequate and geographically balanced supply of land is designated for a range of industrial purposes.
- **Goal 2:** Promote the future economic strength and well being of Kern County and its residents without detriment to its environmental quality.
- **Goal 3:** Ensure compatibility with land use designations such as residential, commercial, or other land uses that may be affected by such activities.

Policies

- **Policy 5:** Provide for the clustering of new industrial development adjacent to existing industrial uses and along major transportation corridors.
- **Policy 6:** Encourage upgrading the visual character of existing industrial areas through the use of landscaping, screening, or buffering.
- **Policy 7:** Require that industrial uses provide designed features such as screen walls landscaping, increases height and/or setback, 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.
- **Policy 8:** The County shall give priority to proposed industrial developments where:
 - i. Specific uses are proposed in conjunction with submittal of a concurrent precise development plan; and
 - ii. Where multiple phases, tenants, or lots are proposed through the adoption of a master precise development plan in conjunction with a General Plan Amendment.
- **Policy 12:** All industrial development equal to or greater than 40 acres in a rural area will require the adoption of a Specific Plan prior to development approval.

- **Policy 13:** Where feasible, locate future industrial activities in close proximity to railroad facilities and inter- and intra-State transportation corridors to minimize extensive travel through urban areas and to promote alternative transportation of goods.

Implementation Measures

- **Implementation Measure G:** Require a Specific Plan for industrial land projects (as defined in the Assumptions Section of the Special Treatment Areas) to identify site specific issues and implementation, such as infrastructure, circulation, compatibility, and public services and facilities.

Section 1.9 Resource

Map Codes

- **Map Code 8.1 (Intensive Agriculture):** Areas devoted to the production of irrigated crops or having a potential for such use. Other agricultural uses, while not directly dependent on irrigation for production, may also be consistent with the intensive agriculture designation. Minimum parcel size is 20-acres gross.

Uses shall include, but are not limited to, the following:

Irrigated cropland; orchards; vineyards; horse ranches; raising of nursery stock ornamental flowers and Christmas trees; fish farms' bee keeping' ranch and farm facilities and related uses; one single-family dwelling unit; cattle feed yards; dairies; dry land farming; livestock grazing; water storage; groundwater recharge areas; mineral; aggregate; and petroleum exploration and extraction; hunting clubs; wildlife preserves; farm labor housing; public utility uses; and agricultural industries pursuant to provisions of the Kern County Zoning Ordinance, and land within development areas subject to significant physical constraints.

- **Map Code 8.3 (Extensive Agriculture):** Agricultural uses involving large amounts of land with relatively low value-per-acre yields, such as livestock grazing, dry land farming, and woodlands. Minimum parcel size is 20-acres gross, except lands subject to a Williamson Act Contract/Farmland Security Zone Contract, in which case the minimum parcel size shall be 80-acres gross.

Uses shall include, but are not limited to, the following:

Livestock grazing; dry land farming; ranching facilities; wildlife and botanical preserves; and timber harvesting; one single-family dwelling unit; irrigated croplands; water storage or groundwater recharge areas; mineral; aggregate; and petroleum exploration and extraction; and recreational activities, such as gun clubs and guest ranches; and land within development areas subject to significant physical constraints.

Goals

- **Goal 1:** To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations which will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources, or diminish the other amenities which exist in the County.

- **Goal 2:** Protect areas of important mineral, petroleum, and agricultural resource potential for future use.
- **Goal 3:** Ensure the development of resource areas minimize effects on neighboring resource lands.
- **Goal 5:** Conserve prime agriculture lands from premature conversion.

Policies

- **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 5:** Areas of low intensity agriculture use (Map Code 8.2 (Resource Reserve), Map Code 8.3 (Extensive Agriculture), Map Code 8.5 (Resource Management)) should be of an economically viable size in order to participate in the State Williamson Act Program/ Farmland Security Zone Contract.
- **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 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.
- **Policy 19:** In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision-making body, as part of its deliberations, will ensure that:
 - (a) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
 - (b) The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement.

Section 1.10 General Provisions

Goal

- **Goal 1:** Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving

valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

Section 1.10.1 Public Services and Facilities

Policies

- **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 Public Health Services Department and the California Regional Water Quality Control Board. The County's Public Health Services 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 13290-13291.70 (Assembly Bill 885) (2000).
- **Policy 15:** Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by California Environmental Quality Act (CEQA) 64 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 extension 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.

Implementation Measure

- **Implementation Measure E:** All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply and Preservation of Environmental Health Rules and Regulations, administered by the Environmental Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site specific documentation that characterizes the quality of the upper groundwater in the project vicinity and evaluation of the extent to which, if any, the proposed use of alternative septic systems will adversely impact groundwater quality. If the evaluation indicates that the upper most groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant shall be required to supply sewage collection, treatment and disposal facilities.

Section 1.10.2 Air Quality

Goals

- **Goal 1:** Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

Policies

- **Policy 18:** The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be placed on minimizing air quality degradation in the desert to enable effective military operations and in the valley region to meet attainment goals.
- **Policy 19:** In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision-making body, as part of its deliberations, will ensure that:
 - a. All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
 - b. The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.
- **Policy 20:** The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District on ministerial permits.
- **Policy 21:** The County shall support air districts' efforts to reduce PM₁₀ and PM_{2.5} emissions.
- **Policy 22:** Kern County shall continue to work with the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District toward air quality attainment with federal, state, and local standards.
- **Policy 23:** The County shall continue to implement the local government control measures in coordination with the Kern Council of Governments and the San Joaquin Valley Unified Air Pollution Control District.

Implementation Measures

- **Implementation Measure F:** All discretionary permits shall be referred to the appropriate air district for review and comment.
- **Implementation Measure G:** Discretionary development projects involving use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:
 - a. Minimizing idling time.
 - b. Electrical overnight plug-ins.

- **Implementation Measure H:** Discretionary projects may use one or more of the following to reduce air quality effects:
 - a. Pave dirt roads within the development.
 - b. Pave outside storage areas.
 - c. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
 - d. Use of alternative fuel fleet vehicles or hybrid vehicles.
 - e. Use of emission control devices on diesel equipment.
 - f. Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces.
 - g. Provide bicycle lockers and shower facilities on site.
 - h. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
 - i. The use and development of park and ride facilities in outlying areas.
 - j. Other strategies that may be recommended by the local Air Pollution Control Districts.

Section 1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation

Policy

- **Policy 25:** 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.

Implementation Measure

- **Implementation Measure O:** On a project specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.

Section 1.10.5 Threatened and Endangered Species

Policies

- **Policy 27:** Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.
- **Policy 28:** 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 29:** 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 30:** The County will promote public awareness of endangered species laws to help educate property owners and the development community of local, State, and federal programs concerning endangered species conservation issues.
- **Policy 31:** 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 32:** 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.

Implementation Measures

- **Implementation Measure Q:** Discretionary projects shall consider effects to biological resources as required by the California Environmental Quality Act.
- **Implementation Measure R:** Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to the California Environmental Quality Act.

Section 1.10.6 Surface Water and Groundwater

Policies

- **Policy 34:** Ensure that water quality standards are met for existing users and future development.
- **Policy 39:** Encourage the development of the County's ground water supply to sustain and ensure water quality and quantity for existing users, planned growth, and maintenance of the natural environment.
- **Policy 41:** Review development proposals to ensure adequate water is available to accommodate projected 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, to prevent the degradation of the watershed to the extent practical.
- **Policy 46:** In accordance with the Kern County Development Standards, tank truck hauling of domestic water for land developments or lots within new land developments is not permitted.

Section 1.10.7 Light and Glare

Policies

- **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.

Implementation Measures

- **Implementation Measure W:** Applications for General or Specific Plan Amendments will include sufficient data for review to facilitate desirable new development proposals consistent with General Plan policies, using the following criteria and guidelines:
 - i. The provision of adequate water, sewer, and other public services to be used.
 - ii. The provision of adequate on-site nonpublic water supply and sewage disposal if no public systems are available or used.
- **Implementation Measure AA:** The County shall utilize CEQA Guidelines and the provisions of the Zoning Ordinance to minimize the impacts of light and glare on adjacent properties and in rural undeveloped areas.

Chapter 2 Circulation Element

Goals

- **Goal 4:** Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.
- **Goal 5:** Maintain a minimum Level of Service (LOS) D for all roads throughout the County unless the roads are part of an adopted Community Plan or Specific Plan which utilizes Smart Growth policies that encourage efficient multi-modal movements.

Section 2.3.3 Highway Plan

Goal

- **Goal 5:** Maintain a minimum LOS D.

Policy

- **Policy 1:** Development of roads within the County shall be in accordance with the Circulation Diagram Map. The chartered roads are usually on section and midsection lines. This is because the road centerline can be determined by an existing survey.
- **Policy 3:** The 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; Collector [Secondary Highway] Minimum 90-foot right-of-

way; Commercial-Industrial Street Minimum 60-foot right-of-way; and Local Street [Select Local Road] Minimum 60-foot right-of-way.

Section 2.3.4 Future Growth

Goal

- **Goal 1:** To provide ample flexibility in this plan to allow for growth beyond the 20-year planning horizon.

Policies

- **Policy 2:** The County should monitor development applications as they relate to traffic estimates developed for this plan. Mitigation is required if development causes affected roadways to fall below LOS D. Utilization of the California Environmental Quality Act (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 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 to an acceptable level.
- **Policy 4:** As a condition of private development approval, developers, shall build roads needed to access the existing road network. Developers shall build these roads to County standards unless improvements along state routes are necessary then roads shall be built to California Department of Transportation (Caltrans) standards. Developers shall locate these roads (width to be determined by the Circulation Plan) along centerlines shown on the circulation diagram map unless otherwise authorized by an approved Specific Plan Line. Developers may build local roads along lines other than those on the circulation diagram map. Developers would negotiate necessary easements to allow this.
- **Policy 5:** When there is a legal lot of record, improvement of access to County, city or State roads will require funding by sources other than the County. Funding could be by starting a local benefit assessment district or, depending on the size of a project, direct development impact fees.
- **Policy 6:** The County may accept a developer's road into the County maintained road system. This is at Kern County's discretion. Acceptance would occur after the developer follows the above requirements. Roads are included in the County road maintenance system through approval by the Board of Supervisors.

Section 2.3.9 Scenic Route Corridors

Goals

- **Goal 1:** To safeguard property values while improving the County's image.
- **Goal 3:** To preserve a network of scenic routes interconnection much of the scenic land in the County. Benefits from the establishment of scenic corridor protection measures will accrue to the County as a whole.

2.5.1 Trucks and Highways

Goals

- **Goal 1:** Provide for Kern County's heavy truck transportation in the safest way possible.
- **Goal 2:** Reduce potential overweight trucks.
- **Goal 3:** Use State Highway System improvements to prevent truck traffic in neighborhoods.

Policies

- **Policy 1:** Caltrans should be made aware of the heavy truck activity on Kern County's roads.
- **Policy 2:** Start a program that monitors truck traffic operations.
- **Policy 3:** Promote a monitoring program of truck lane pavement conditions.

Section 2.5.4 Transportation of Hazardous Materials

Goal

- **Goal 1:** Reduce risk to public health from transportation of hazardous materials.

Policies

- **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 3 Noise Element

Goals

- **Goal 1:** Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.
- **Goal 2:** Protect the economic base of Kern County by preventing the encroachment of incompatible land uses near known noise producing roadways, industries, railroads, airports, oil and gas extraction, and other sources.

Policies

- **Policy 1:** Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.
- **Policy 2:** Require noise level criteria applied to all categories of land uses to be consistent with the recommendations of the California Division of Occupational Safety and Health.
- **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 6:** Ensure that new development in the vicinity of airports will be compatible with existing and projected airport noise levels as set forth in the ALUCP.
- **Policy 7:** Employ the best available methods of noise control.

Implementation Measures

- **Implementation Measure C:** Review discretionary development plans, programs and proposals, including those initiated by both the public and private sectors, to ascertain and ensure their conformance to the policies outlined in this element.
- **Implementation Measure G:** At the time of any discretionary approval, such as a request for a General Plan Amendment, zone change or subdivision, the developer may be required to submit an acoustical report indicating the means by which the developer proposes to comply with the noise standards. The acoustical report shall:
 - a) Be the responsibility of the applicant.
 - b) Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.
 - c) Be subject to the review and approval of the Kern County Planning Department and the Environmental Health Services Department. All recommendations therein shall be complied with prior to final approval of the project.
- **Implementation Measure I:** Noise analyses shall include recommended mitigation, if required, and shall:
 - a) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
 - b) Include estimated noise levels, in terms of CNEL, for existing and projected future (10 – 20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.
 - c) Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.
 - d) Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.

Chapter 4 Safety Element

Goals

- **Goal 1:** Minimize injuries and loss of life and reduce property damage.

- **Goal 2:** Reduce economic and social disruption resulting from earthquakes, fire, flooding, and other geologic hazards by assuring the continuity of vital emergency public services and functions.
- **Goal 5:** Ensure the availability and effective response of emergency services following a catastrophic event.
- **Goal 7:** Ensure that adequate emergency services and facilities are available to the residents of Kern County through the coordination of planning and development of emergency facilities and services.
- **Goal 8:** Reduce the public's exposure to fire, explosion, blowout, and other hazards associated with the accidental release of crude oil, natural gas, and hydrogen sulfide gas.

Section 4.3 Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure

Policy

- **Policy 1:** The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.

Section 4.5 Landslides, Subsidence, Seiche, and Liquefaction

Policies

- **Policy 1:** Determine the liquefaction potential at sites in areas of shallow groundwater (Map Code 2.3) prior to discretionary development and determine specific mitigation to be incorporated into the foundation design, as necessary, to prevent or reduce damage from liquefaction in an earthquake.
- **Policy 3:** Reduce potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.

Section 4.6 Wildland and Urban Fire

Policies

- **Policy 1:** Require discretionary projects to assess impacts on emergency services and facilities.
- **Policy 2:** The County will encourage the promotion of public education about fire safety at home and in the work place.
- **Policy 3:** The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.
- **Policy 4:** Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.
- **Policy 6:** All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.

Implementation Measure

- **Implementation Measure A:** Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

Section 4.9 Hazardous Materials

Policy

- **Policy 2:** Innovative technologies to manage hazardous waste streams generated in Kern County will be encouraged.

Kern County Zoning Ordinance

Title 19 of the Kern County Ordinance Code provides a description of permitted uses, building height, yard and distance between buildings for the various zoning designations within the County. The Ordinance consists of two primary parts: a map that delineates the boundaries of zoning districts; and text that explains the purpose of the district, specifies permitted and conditional uses and establishes development and performance standards.

Kern County Zoning Ordinance contains different chapters related to composting facilities. Chapter 19.12 discusses waste facilities and specifically allows agricultural green waste composting, with certain exceptions that would not be applicable to the proposed project. 19.46 refers to Resource Extraction and Energy Development Uses, Waste Facilities and Institutional Uses. Under waste facilities, green waste composting is included.

South Kern Industrial Center Specific Plan

The proposed project is within the South Kern Industrial Center (SKIC). The SKIC consists of approximately 744 acres which are planned for in the SKIC Specific Plan (SKICSP). The SKICSP is located approximately 18 miles southwest of Bakersfield and approximately 7 miles east of Taft, in unincorporated Kern County. The composting Facility was approved by Kern County under Conditional Use Permit No. 2, Map No. 158 (“Existing CUP”) on October 22, 2002 (Resolution No. 2002-421, along with a Supplemental Environmental Impact Report which was certified on the same date (collectively “Existing Entitlements”). Subsequent to the approvals, the Facility underwent construction and began operations in 2006.

The project site is located within the SKICSP, which was most recently amended June 22, 2021 (SPA 159 Map 500). The purpose of the SKICSP is to be used as a planning tool to closely define the planning criteria of the specific plan area and to define the nature and extent of growth and to ensure orderly development. The SKICSP was designed to achieve three primary goals; implement the Kern County General Plan, establish of development standards, and guide the planned development of the SKIC. The SKICSP specifically encourages industrial land use. The SP district requires compliance with the development standards of the M-3 zoning district of the Kern County General Plan, however, the SP district does not allow for as many heavy industrial land uses as the M-3 zoning district to provide better control over and reduce the potential for impacts from development within the SKICSP. The SP district is also consistent with the KCGO map code 7.3 though more restrictive.

The SKICSP is internally consistent with the Kern County General Plan and incorporates the County-wide General Plan goals and policies, and by addressing the mandatory General Plan Elements. Accordingly, the land use designation within SKICSP mirror those of the existing Kern County General Plan. The land use designations for the project site within the SKICSP are 2.5 (Flood Hazard Area) and 3.4 (Solid Waste Facilities). These designations were deemed consistent with the provision of State Code Section 65450 et. Seq.

General Overview

Goal

- **Goal 3:** To promote the health, safety, and welfare relative to the exposure of population from adverse conditions that may be attributed to the heavy industrial users.

Policies

- **Policy 4:** All proposed projects shall be consistent with the Kern County General Plan and this Specific Plan, as required by the State of California Government Code. All projects shall adhere to the Kern County Zoning Ordinance, except as modified herein. This does not preclude requests for modifications, variances, and conditional use permits as provided in the Kern County Zoning Ordinances, except for the limitations of uses and development standards as provided within this document.
- **Policy 7:** Any and all construction requiring a building permit shall conform to the standards set forth in this Specific Plan, with compliance to the Kern County Code of Building Regulations and all other applicable codes adopted by Kern County.
- **Policy 8:** Construction or alteration of structures or other improvements requiring a building permit shall not be allowed until the necessary plans and studies, have been approved by Kern County Planning Department as required for building permit approval.
- **Policy 9:** All fences, hedges, and walls shall conform to the requirements of the Kern County Zoning Ordinance except where the approved requirements of the Specific Plan's jurisdiction are more restrictive. In such cases, the requirements of the Specific Plan shall be used.
- **Policy 10:** Prior to the issuance of any development or use permit, the County shall make the finding, based on information provided by CEQA environmental documents, staff analysis, and the applicant, that adequate public and private services are available to serve the proposed development.
- **Policy 11:** All methods of sewage disposal and water supply within the Specific Plan Area shall meet or exceed the requirements of the Kern County Department of Environmental Health Services and the California Regional Water Quality Board.
- **Policy 12:** Should any archaeological or historic resource be unearthed during construction, work shall be halted in the area of the discovery until the finds can be assessed by a qualified and certified archaeologist, approved by the County of Kern, so that appropriate mitigation measures to preserve the find can be carried out.

Land Use Element**Goals**

- **Goal 1:** To encourage well-planned industrial development which is compatible with the adjacent land uses.
- **Goal 4:** To promote economic strength while observing inherent environmental limitations and physical constraints that could potentially affect the viability of the Specific Plan area.

Policies

- **Policy 2:** Development and Improvements are subject to Site Plan Review Processing Guidelines found in this plan (Appendix A) prior to issuance of a development permit.
- **Policy 9:** Encourage improving the visual character of heavy manufacturing and industrial areas through the use of landscaping and screening of storage areas.
- **Policy 10:** Evaluate the potential noise impacts of any development requiring discretionary approval and require that mitigation measures be incorporated where significant adverse effects are identified.
- **Policy 11:** Proposed industrial development must demonstrate adequacy of the planned water and sewer facilities
- **Policy 14:** Coordinate all industrial use activities in the Plan area with an effective Circulation Plan that provide adequate circulation in and around the site and promotes transportation safety.

Circulation Element**Goals**

- **Goal 1:** To minimize the vehicle miles travelled to the greatest extent possible.
- **Goal 2:** To maintain public safety and efficient routes for anticipated traffic patterns.

Policies

- **Policy 2:** Encourage the use of public transportation and other alternative modes of transportation (i.e. employee vanpools and carpools), wherever possible, to reduce the amount of vehicle trips to and from the Specific Plan Area.

Public Facilities and Services Element**Goals**

- **Goal 3:** To provide for the coordinated planning and development of the Specific Plan Area police/security and fire services.

Policies

- **Policy 1:** Strengthen the existing procedures for planning and coordinating the required infrastructure utilities, facilities, and services for the site.
- **Policy 2:** Utilize financing methodologies which enable the installation of improvements and infrastructure which otherwise would be economically infeasible for the individual developer to construct.

Environmental Resource Management Element

Goals

- **Goal 1:** To ensure and protect a safe and adequate supply of water for the Specific Plan area.
- **Goal 2:** To ensure that all land uses within the Specific Plan area are adequately protected from flood hazards and problems related to surface water drainage.
- **Goal 3:** To provide for adequate, safe, and cost-effective disposal of wastewater.
- **Goal 4:** To minimize the impacts that will be created by the heavy industrial uses.

Policies

- **Policy 1:** Promote the conservation of renewable and non-renewable natural resources and encourage development and land uses which are compatible with conditions affecting the site.
- **Policy 2:** Encourage soil management and conservation techniques where erosive soil conditions exist.
- **Policy 4:** Minimize the potential impacts caused by the potential flooding condition.
- **Policy 6:** Incorporate standards established in the Kern County Air Quality Maintenance Plan.
- **Policy 8:** Archaeologically, culturally, and biologically sensitive areas shall be protected, wherever feasible.

Seismic Safety Element

Goals

- **Goal 1:** To encourage precautionary measures which significantly reduce loss of life, bodily injury and property damage resulting from potential hazardous occurrences.
- **Goal 3:** To assure that fire hazardous materials regulation and emergency medical service problems are continuously identified and addressed in a pro-active way in order to optimize safety and efficiency.
- **Goal 4:** To minimize the hazards to public health, safety, and welfare that results from natural and man-made phenomena.

Policies

- **Policy 1:** Minimize the environmental, economic, and social impacts stemming from hazardous occurrences such as fire, flood, earthquake, and hazardous materials.
- **Policy 2:** Promote company education regarding matters of fire, hazardous materials and other safety issues incidental to the safe and orderly execution of jobs in the workplace.
- **Policy 3:** Protect plan Area workers from the risk of injury and property damage that could potentially result from fire hazards, geologic hazards, exposure to potentially hazardous substances.

- **Policy 6:** Develop procedures for the review of the proposed facility which use, manufacture, and/or store hazardous materials.
- **Policy 7:** Enforce Ordinances regulating the use, manufacturing, sale, storage, transport and disposal of hazardous materials.
- **Policy 8:** Ensure adequate fire protection within the Specific Plan Area and the surrounding areas in order to guard against potential hazards from fire.
- **Policy 9:** Establish and enforce programs for reduction of hazardous and geologic risks.

Noise Element

Goals

- **Goal 1:** To maintain Noise level standards required by the Noise Element of the Kern County General Plan for heavy Industrial/manufacturing land uses.
- **Goal 2:** To protect adjacent land uses from the potentially harmful effects of exposure to excessive noise.

Policy

- **Policy 2:** Require that noise level criteria for the heavy industrial land use be consistent with the Noise Element of the Kern County General Plan.

Kern County's Solid Waste Management Plan

The Solid Waste Management Plan is a comprehensive guide for all solid waste management activities in the County. The plan identifies the existing solid waste generation and disposal facilities in Kern County, estimates future solid waste disposal demand, and identifies programs to meet this future need.

Kern County and Incorporated Cities Hazardous Waste Management Plan

The Kern County and Incorporated Cities Hazardous Waste Management Plan focuses on the siting of hazardous waste disposal facilities, the transport of hazardous waste in the County, protection of water resources from hazardous waste contamination, and public education concerning the use and disposal of hazardous waste.

4.11.4 Impacts and Mitigation Measures

Methodology

The potential impacts associated with the proposed project are evaluated on a qualitative basis through a comparison of the existing land use and the proposed land uses. The change in the land use on the project site is significant if the effect described under the Thresholds of Significance below occurs as a result of the proposed actions. The evaluation of project impacts is based on professional judgment, analysis of the County's visual resources policies and the significance criteria established in Appendix G of the State CEQA Guidelines.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated May 2019) identify the following criteria, as established in Appendix G of the State CEQA Guidelines, to determine if a project could potentially have a significant adverse effect related to land use and planning. Please note that the environmental issue areas discussed in the IS/NOP are different from those noted above, as Appendix G of the CEQA Guidelines were revised in January 2019 and Kern County's CEQA thresholds were updated accordingly in May 2019, which was after the IS/NOP was published. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to land use and planning if it would:

A project could have a have a significant adverse effect on land use if the project would:

- a. Physically divide an established community; and/or
- b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

As lead agency, Kern County determined in the Initial Study/Notice of Preparation (IS/NOP), located in Appendix A of this EIR, that the proposed project would not result in significant impacts to some of these environmental issue areas; these issue areas are thus scoped out of this EIR. Please note that the environmental issue areas discussed in the IS/NOP are different from those noted above, as Appendix G of the CEQA Guidelines was revised in January 2019 and the Kern County Environmental Checklist was revised in May 2019, which was after the IS/NOP was published for this project. It was determined that the project would not:

- a. Physically divide an existing community or contribute to the decline of an existing community (a physical change that interrupts the cohesiveness of the neighborhood).

The SKICSP land use designation for the project site is Solid Waste Facilities. The surrounding land uses are designated by the Kern County General Plan as predominately agriculture, with some commercial uses. Surrounding land is zoned Exclusive Agriculture, Limited Agriculture, and Floodplain Primary. The nearest communities are the City of Taft, located approximately 7 miles to the west, and the City of Maricopa, located approximately 9.5 miles to the southwest. The closest residence is located approximately 1.5 miles north from the project site. The facility has been in continuous operations since 2006; the project will not physically divide an established community. No further analysis is warranted.

Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Project Impacts and Mitigation Measures

Impact 4.11-1. The project would conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

The Kern County General Plan and Kern County Zoning Ordinance establish land use policies and regulations that are applicable to the project. The following discussion evaluates the project's conformity with these plans, policies, and regulations.

The proposed project would require the following land use related discretionary approvals, as further described in the Land Use and Planning Section of the EIR.

- Approval by the Kern County Planning Commission for proposed conditional use permits for the project site;
- Approval of modifications to the Solid Waste Facilities Permit, Odor Impact Minimization Plan, Report of Compost Site Information; and Grading and Building Permits, and Fire Safety Plan (when required); and
- Approval of updated Hazardous Materials Business Plan and Spill Prevention Control and Countermeasure Plan.

Kern County General Plan

Shown above in **Table 4.11-2, *Land Use Designations and Zoning Designations*** is the Kern County General Plan designations and zoning of the project site and surrounding areas. **Figure 4.11-1, *On-Site and Surrounding Land Uses***, shows the project site has General Plan land use designations of 3.4/2.5 (Solid Waste Facility/Flood Hazard) and is zoned as the South Kern Industrial Specific Plan. The General Plan land use designation of 3.4 (Solid Waste Facility) lists organic waste disposal facilities as allowable uses. This is consistent with the proposed project. The project site is an existing compost facility, initially approved in 2020. More specifically, the existing composting facility was authorized by the approval of CUP No. 2, Map No. 158 on October 22, 2002 by the Kern County Board of Supervisors (Resolution No. 2002-421). The original CUP was applied for in conjunction with GPA No. 4, Map No. 158. Impacts were analyzed in a Supplemental EIR in 2002 to the 1993 EIR for the SKICSP. The continued use of the existing composting site and expansion into the previously permitted area is not consistent with the existing Kern County General Plan designations and associated goals, policies and implementation measures. In addition, the proposed project would not result in any significant unavoidable impacts resulting from a conflict with applicable plans.

Table 4.11-3, *Consistency Analysis with Kern County General Plan Policies for Land Use*, below, presents an evaluation of the project's consistency with the Kern County General Plan. The table lists the goals and policies identified above in the regulatory setting and provides analysis on the project's general consistency with overarching policies. Additionally, the table provides goals and policies of issue areas that are presented in more detail in other sections of the EIR. As evaluated

in detail in **Table 4.11-3**, *Consistency Analysis with Kern County General Plan Policies for Land Uses*, the project is consistent with the goals and policies of the Kern County General Plan.

Kern County Zoning Ordinance

As shown in **Table 4.11-1**, *On-Site and Surrounding Land Uses*, and **Figure 4.11-1**, *On-Site and Surrounding Land Uses*, the project site has the existing zoning classification of South Kern Industrial Specific Plan (SP).

Conditional Use Permit No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421)

As described in the **Chapter 3**, *Project Description*, the existing composting facility was initially approved in 2002 via a CUP, which was applied for in conjunction with GPA No. 4, Map No. 158. The current project involves a request to modify the existing CUP to facilitate the expanded use of feedstocks to comply with state requirements and to authorize the installation of additional facilities to receive, process and compost the expanded feedstocks. The current project will not result in the expansion of the previously approved 100 acre compost site or the maximum quantity of materials the Facility can receive.

With this discretionary approval and approval of the proposed modifications to the CUP, the project proponent could do the following:

- Increase the types of composting feedstocks accepted at the facility, including digestate, in response to Assembly Bill 1826 and Senate Bill 1383 requirements;
- Install new equipment to be used as part of pre-processing and post-composting operations, including, but not limited to grinders, electrical screens, etc. to improve composting efficiency and capability;
- Increase all pile heights from 15 feet to 20 feet, including, but not limited to, receiving, mixing, composting, curing, screening, and finished product; and
- Increase storage time of finished compost product from 7 days to 180 days to accommodate seasonal markets and be consistent with regulatory permitting requirements.

As discussed in the various sections of this EIR, impacts to individual resource areas would have no impact, a less than significant impact, or would be less than significant with mitigation incorporated. Thus, the project would be consistent with applicable land use policies and regulations, and impacts related to consistency with the zoning would be less than significant.

South Kern Industrial Center Specific Plan

Table 4.11-4, *Consistency Analysis with the South Kern Industrial Center Specific Plan*, presents an evaluation of the project's consistency with the South Kern Industrial Center Specific Plan. The table includes the goals and policies identified above in the regulatory setting and other applicable goals and policies from other elements of the Specific Plan. The table provides analysis on the project's general consistency with overarching policies. As evaluated in detail in **Table 4.11-4**,

Consistency Analysis with the South Kern Industrial Center Specific Plan, below, the project is consistent with the goals and policies of the SKICSP.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Table 3-5, Cumulative Projects List (refer to **Chapter 3, Project Description**) describes the related cumulative land use projects in the surrounding areas have been: (1) submitted for plan processing; (2) approved by the County of Kern; and/or (3) engaged in active construction programs. The area influenced by cumulative land use effects related to adjacent parcels and the surrounding planned development areas is described would not be substantial. The surrounding areas are developed with solar sites and a natural gas and petroleum site to the north. None of these areas are considered valuable habitat for the purposes of the Valley Floor HCP and are also in the White zone.

Potential land use impacts require evaluation on a case-by-case basis because of the interactive effects of a specific development and its immediate environment. The project would include a request to for an amendment to the existing CUP so the facility could comply with state law related to composting materials and expand the composting operations into a heavily disturbed area already permitted for such use. Approval of the amendment would enable land uses that are consistent with associated goals, policies and implementation measures of the Kern County General Plan. The proposed project also is consistent with the Kern County Zoning Ordinance. Additionally, as described in **Table 4.11-3, Consistency Analysis with Kern County General Plan Policies for Land Use** and **Table 4.11-4, Consistency Analysis with the South Kern Industrial Center Specific Plan** below, the project would be consistent with the goals and policies of the Kern County General Plan and SKICSP, respectively.

All related projects would be required to undergo environmental review on a case-by-case basis, in accordance with the requirements of CEQA. Each related project would also be required to demonstrate consistency with all applicable planning documents governing the project site, including the Kern County General Plan and the Kern County Zoning Ordinance. Should potential impacts be identified, appropriate mitigation would be prescribed that would reduce potential impacts to less than significant. Thus, the impacts of the proposed project in conjunction with cumulative development in the site vicinity and potentially cumulative land use impacts are anticipated to be less than significant.

Mitigation Measures

No mitigation measures are required

Level of Significance

Impacts would be less than significant.

Project Consistency with the Kern County General Plan

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
Chapter 1 Land Use, Open Space and Conservation Element		
Goal 1: Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.	Consistent	The project site is in an area that is designated for industrial uses. The proposed project does not include residential uses and would not directly induce growth. The proposed project has been designed to minimize impacts, includes mitigation to reduce potential impacts, and is considered a beneficial use as it would increase composting volumes of green waste and reduce the waste stream to landfills. The proposed project would not handle or use acutely hazardous materials and there is adequate public utilities and public services to serve the project site.
1.2 Non Jurisdictional Land		
Goal 1: To promote harmonious and mutually beneficial uses of land among the various jurisdictions and land management entities present in Kern County.	Consistent	Consistent with this goal, the project will facilitate the continued use and expansion of the existing compost facility was originally approved in 2002 and began operation in 2006. The use is consistent with the current Southern Kern Industrial Center Specific Plan zoning and overall intent for the plan area. This is compatible and harmonious with the use of land and zoning of the adjacent and nearby areas that also are used for industrial purposes including solar, petroleum uses, and undeveloped agricultural lands. The proposed project would not result in any conflicts with the current surrounding uses or the continued use. To encourage precautionary measures which significantly reduce loss of life, bodily injury and property damage resulting from potential hazardous occurrences.
1.3 Physical and Environmental Constraints		
Goal 1: To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.	Consistent	Consistent with this policy, the project includes the expansion and continuation of an existing composting facility that is not located on a hazardous site or include a use that would exacerbate any existing geological hazards. See Section 4.9, Hazards and Hazardous Materials , of this EIR.

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
<p>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.</p>	Consistent	<p>Consistent with this policy, no portion of the project site is located in Map Code designations 2.1 (Seismic Hazard). The project site would be located in an area with Map Code designation 2.5 (Flood Hazard) but the project does not propose any new habitable structures, nor would it result in new buildings exposing a substantial number of people to flooding hazards. Hydrology impacts are evaluated in Section 4.10, Hydrology and Water Quality, of this EIR, seismic hazards are described and analyzed in Section 4.7, Geology and Soils, of this EIR. The project site is not located on land with any other type of hazard designation. With approval of the modified CUP, the project would comply with Policy 1.</p>
<p>Policy 2: In order to minimize risk to Kern County residents and their property, new development will not be permitted in hazard areas in the absence of implementing ordinances and programs. These ordinances will establish conditions, criteria and standards for the approval of development in hazard areas.</p>	Consistent	<p>See the Project Consistency discussion for <i>1.3 Physical and Environmental Constraints, Goal 1</i> above.</p>
<p>Policy 3: Zoning and other land use controls will be used to regulate and, in some instances, to prohibit development in hazardous areas.</p>	Consistent	<p>Project conforms to and is consistent with zoning, non-hazardous area, no habitable structures.</p>
<p>Policy 8: Encourage the preservation of the floodplain’s flow conveyance capacity, especially in floodways, to be open space/passive recreation areas throughout the County.</p>	Consistent with implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2.	<p>Hydrology impacts are evaluated in Section 4.10, Hydrology and Water Quality, of this EIR. The site is identified with a Zone A special flood hazard area (SFHA) (FEMA, 2008). SFHA’s Zone A are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood (FEMA, 2020). While the project site is in this zone, no habitable structures are proposed by the project. The existing and expanded composting areas and ancillary uses would have a minimal effect on floodplain capacity as there are large areas of pervious surfaces that</p>

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
Policy 9: Construction of structures that impede water flow in a primary floodplain will be discouraged.	Consistent	would absorb stormwater runoff. Mitigation Measure MM 4.10-1 and MM 4.10-2 would minimize direct impacts on erosion, drainage, and flooding.
Policy 10: The County will allow lands which are within flood hazard areas, other than primary floodplains, to be developed in accordance with the General Plan and Floodplain Management Ordinance, if mitigation measures are incorporated so as to ensure that the proposed development will not be hazardous within the requirements of the Safety Element (Chapter 4) of this General Plan.	Consistent with implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2 .	See the Project Consistency discussion for <i>1.3 Physical and Environmental Constraints, Policy 8</i> , above. Also see Section 4.10, Hydrology and Water Quality , of this EIR. Because the project would not significantly alter the existing topography and otherwise maintain flood flow conveyance, the project would not increase the potential for flooding beyond existing conditions. Flooding in this location would not result in a safety hazard, as the project would not establish a new permanent population on-site. Further, the project would be developed in accordance with the General Plan and Floodplain Management Ordinance.
Policy 11: Protect and maintain watershed integrity within Kern County.	Consistent	See the Project Consistency discussion for <i>1.3 Physical and Environmental Constraints, Policy 8</i> , above. Also see Section 4.10, Hydrology and Water Quality , of this EIR. The proposed project would minimize effects on the surrounding watershed and includes a berm to contain storm water within the project site and includes other storm water control measures, including an existing detention basin such that no substantial changes to flows or watershed flow regime would occur.
1.4 Public Facilities and Services (Map Code 3.7 Other Waste Facilities)		
Goal 1: Kern County residents and businesses should receive adequate and cost-effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.	Consistent	As described in Section 4.14, Public Services , of this EIR, while the proposed project would increase the footprint of the site it would not result in a substantial increase in the number of employees on-site. Many of new employees would be drivers and transient through the site through the delivery or materials to be composted and transport of composted materials from the project site. The proposed project would

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
<p>Goal 9: Serve the needs of industry and Kern County residents in a way that does not degrade the water supply and the environment and protect public health and safety by avoiding surface and subsurface nuisances resulting from the disposal of hazardous wastes, irrespective of the geographic origin of the waste.</p>	Consistent	<p>not result in a substantial increased demand for police and fire protection services or require the expansion of any current facilities. Overall the demand for police and fire protection services would remain similar to existing conditions and the proposed project serves this goal.</p>
<p>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.</p>	Consistent	<p>See the Project Consistency discussion for <i>1.3 Physical and Environmental Constraints, Policy 1, Policy 8, Policy 10, and Policy 11, and 1.4 Public Facilities and Services Goal 1</i>, above.</p> <p>Impacts to utilities are evaluated in Section 4.16, Utilities and Service Systems, of this EIR. As described therein, although the project would increase its current footprint, it would not increase the need for utility service such that infrastructure improvements would be required to service the project. Utility improvements would be made within the site and areas of disturbance analyzed in this EIR, but off-site improvements including new generation or transmission would not be required. Therefore, this policy does not apply.</p>
<p>Policy 2: The efficient and cost-effective delivery of public services and facilities will be promoted by designating areas for urban development which occur within or adjacent to areas with adequate public service and facility capacity.</p>	Consistent	<p>See the Project Consistency discussion for <i>1.4 Public Services, Goal 1</i>, above.</p>
<p>Policy 3: Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.</p>	Consistent	<p>See the Project Consistency discussion for <i>1.4 Public Services, Goal 1</i>, above.</p>
<p>Policy 6: The County will ensure adequate fire protection to all Kern County residents.</p>	Consistent	<p>See the Project Consistency discussion for <i>1.4 Public Services, Goal 1</i>, above.</p>

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
Policy 7: The County will ensure adequate police protection to all Kern County residents	Consistent	See the Project Consistency discussion for <i>1.4 Public Services, Goal 1</i> , above.
Policy 9: Applicants for all solid waste disposal facilities (Map Code 3.4) and other waste facilities (Map Code 3.7) shall submit closure plans and financial assurance estimates to guarantee closure in conjunction with approval of the required conditional use permit. The requirement for financial assurances may also be satisfied if a State or federal agency will have lead permit responsibility for approval or operational oversight of the facility and which also will require the posting of financial assurances to guarantee site closure. In conjunction with the financial assurances filed with the County, applicants shall enter into a contract with the County to guarantee site closure.	Consistent	As part of the project approval process, a closure plan and financial assurance are to guarantee facility closure, at the time that process occurs, would be provided and would satisfy all state, federal, and local requirements
Policy 10: Ensure landfill capacity for Kern County residents and industries.	Consistent with implementation of Mitigation Measure MM 4.17-1	Impacts to the landfill capacity are evaluated Section 4.17, Utilities and Service Systems , of this EIR. As described therein, the proposed project would generate a limited amount of increased waste as a result of expanded operations and would not significantly impact Kern County landfills. Additionally, the proposed project increases the volume of organic waste that would be diverted from existing landfills. The proposed project would reduce the total volume of waste needing disposal in landfills. Further, implementation of Mitigation Measure MM 4.17-1 requires that debris and waste generated be recycled to the extent feasible, and an on-site recycling coordinator be designated by the project proponent to facilitate recycling efforts.
Policy 11: A solid waste disposal facility (Map Code 3.4) and other waste facilities (Map Code	Consistent	See the Project Consistency discussion for <i>1.4 Public Services, Policy 1</i> , above. The proposed project includes a request to approve the conditional use permit to enable acceptance of new materials that would

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
3.7) shall pay its pro-rata share of upgrading pertinent County roads.		increase truck trips to and from the site. Consistent with this policy the project would pay its pro-rata share of upgrading pertinent County roads.
Policy 12: For solid waste disposal facilities, all necessary permits shall be obtained from the Kern County Environmental Health Services Department, Kern County Waste Management Department, State of California Integrated Waste Management Board, State of California Regional Water Quality Control Board, the appropriate Air Pollution Control District, and all other responsible agencies prior to the commencement of operations.	Consistent	See the Project Consistency discussion for <i>1.4 Public Services, Policy 1</i> , above. See the Project Consistency discussion for <i>1.4 Public Services Policy 11</i> above. The proposed project also would comply with all federal, state, and local statutes and regulations and obtain all permits.
Policy 13: The County shall ensure landfill capacity for the residents and industry of Kern County.	Consistent with implementation of Mitigation Measure MM 4.16-1	See <i>1.4 Public Services, Policy 10</i> , above. The project would be required to comply with all federal, state, and local statutes and regulations related to the handling and disposal of solid waste, making it consistent with this policy. Landfill capacity is further discussed in Section 4.16, Utilities , of this EIR.
Policy 15: All other waste facilities (non-hazardous/non-disposal) shall designate a buffer around the permitted waste ware as defined by the 3.7 land use designation.	Consistent	The project plans include creation of a new berm and fencing surrounding the expanded composting area. The surrounding areas consist of highly disturbed undeveloped lands, a solar installation, and a petroleum facility north of Santiago Road. This as well as the distance between the facility and uses create an adequate buffer to these and any other future uses within the vicinity.

1.8 Industrial

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
Goal 1: Ensure that an adequate and geographically balanced supply of land is designated for a range of industrial purposes.	Consistent	The proposed project is consistent with the land uses designated by the SKICSP which was adopted by Kern County. The proposed project also is consistent with the County General Plan and County Zoning ordinance which prescribe land use designations and associated allowable uses.
Goal 2: Promote the future economic strength and well-being of Kern County and its residents without detriment to its environmental quality.	Consistent	The proposed project would expand an existing composting facility permitted by an existing CUP. The expansion would increase the job base, reduce waste transported to landfills, increase the economic vitality of nearby communities, and includes mitigation to reduce potential impacts on the environment.
Goal 3: Ensure compatibility with land use designations such as residential, commercial, or other land uses that may be affected by such activities.	Consistent	See the Project Consistency discussion for <i>1.8 Industrial Goal 1</i> , above. The proposed project is consistent with existing County planning documents and would not be incompatible with any surrounding uses or planned uses. There are not residential or commercial uses designated in the surrounding areas.
Policy 5: Provide for the clustering of new industrial development adjacent to existing industrial uses and along major transportation corridors.	Consistent	See the Project Consistency discussion for <i>1.8 Industrial Goal 1, 2, and 3</i> above. The proposed project is designated for industrial uses and is within an area with clustered industrial designations and existing uses including solar facilities and petroleum facilities. The proposed project is consistent with these uses.
Policy 6: Encourage upgrading the visual character of existing industrial area through the use of landscaping, screening, or buffering	Consistent	The proposed project is approximately 0.25 miles from South Lake Road and would not substantially affect views from the roadway which provides transient views to the south from travelers. The proposed project is not located in proximity to any sensitive receptors and the proposed project includes a berm to screen and block views of internal composting activities and piles.

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
<p>Policy 7: Require that industrial uses provide designed features such as screen walls landscaping, increases height and/or setback, 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.</p>	Consistent	See the Project Consistency discussion for <i>1.8 Industrial Goal 8 and Policy 6 and 7</i> above.
<p>Policy 8: The County shall give priority to proposed industrial developments where:</p> <ul style="list-style-type: none"> i. Specific uses are proposed in conjunction with submittal of a concurrent precise development plan; and ii. Where multiple phases, tenants, or lots are proposed through the adoption of a master precise development plan in conjunction with a General Plan Amendment. 	Consistent	See the Project Consistency discussion for <i>1.8 Industrial Goal 1, 2, and 3</i> above. The proposed project is consistent with the allowable uses and the proposed CUP would expand uses consistent with the intent of designation and to comply with state law.
<p>Policy 12: All industrial development equal to or greater than 40 acres in a rural area will require the adoption of a Specific Plan prior to development approval.</p>	Consistent	See the Project Consistency discussion for <i>1.8 Industrial Policy 8</i> , above. The proposed project is consistent with SKICSP.
<p>Policy 13: Where feasible, locate future industrial activities in close proximity to railroad facilities and inter- and intra-State transportation corridors to minimize extensive travel through urban areas and to promote alternative transportation of goods.</p>	Consistent	The proposed project is located in the SKICSP area. There is a railroad facility in proximity, and if deemed feasible in the future, could be used for transportation of composting materials and finished materials to promote alternative transportation.
1.9 Resource		
<p>Goal 1: To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations which will not</p>	Consistent	The project site is located within an area that is designated by the Department of Conservation as Semi-Agricultural and Rural Commercial Land (SARC) and Grazing Land. The existing composting

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
<p>impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources, or diminish the other amenities which exist in the County.</p>		<p>facility is within an area designated as SARC, which is described as farmsteads, agricultural storage and packing sheds, unpaved parking areas, composting facilities, equine facilities, firewood lots, and campgrounds. The balance of the existing permitted area is designated as Grazing Land which is defined as land on which the existing vegetation is suited to the grazing of livestock. This category is used only in California and was developed in cooperation with the California Cattlemen’s association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The existing facility has been continually used for composting since 2006 and the balance of the site has been fallow and routinely disked for weed management. The project would expand and continue use of a compost facility, and among other goals, enable continued operation of a state-of-the-art regional composting facility to meet the organic waste diversion requirements enacted by recent California legislation (AB 32, AB 1826, SB 1383, etc.) and to reduce volatile organic compound and greenhouse gas emissions through the diversion of organic material that would otherwise be disposed of in a landfill. Upon approval of the project, the continued and expanded use of the site for composting will be considered consistent with the land use designation and therefore consistent with this policy.</p>
<p>Goal 2: Protect areas of important mineral, petroleum, and agricultural resource potential for future use.</p>	<p>Consistent</p>	<p>The project site is not located within the bounds of a mineral resource area. See also the Project Consistency discussion for <i>1.9 Resource, Goal 1</i>, above. The Notice of Preparation determined there would be no impacts to Mineral resources.</p>
<p>Goal 3: Ensure the development of resource areas minimize effects on neighboring resource lands.</p>	<p>Consistent</p>	<p>The project site has been operating under an approved CUP for a composting facility since 1993 and has been deemed compatible with the neighboring resource lands. In addition, the project includes modification of the CUP to address continued and expanded operations of the compost facility and will continue to ensure that any effects on neighboring resource lands are minimized.</p>

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
Goal 5: Conserve prime agriculture lands from premature conversion.	Consistent	The project site does not contain any prime agricultural lands. See the Project Consistency discussion for <i>1.9 Resource, Goal 1</i> , above
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.	Consistent	See the Project Consistency discussion for <i>1.9 Resource, Goal 1</i> , above
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.	Consistent	See the Project Consistency discussion for <i>1.9 Resource, Goal 1</i> , above
Policy 5: Areas of low intensity agriculture use (Map Code 8.2 (Resource Reserve), Map Code 8.3 (Extensive Agriculture), Map Code 8.5 (Resource Management)) should be of an economically viable size in order to participate in the State Williamson Act Program/Farmland Security Zone Contract.	Consistent	See the Project Consistency discussion for <i>1.9 Resource, Goal 1</i> , above
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.	Consistent	The project site is flat and does not contain any natural drainages. The proposed project would not result in substantial changes to the on-site topography or drainage patterns and would include water quality mitigation and would comply with all National Pollution Discharge Elimination System Permitting (NPDES) processes by incorporated a Stormwater Pollution Prevention Plan (SWPPP) and best management practices (BMPs). This would minimize erosion and siltation of downstream receiving waters. The proposed project would continue to utilize the existing detention basin on northerly side of the project site.

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
<p>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.</p>	Consistent	<p>As part of the project, the project applicant would extend and expand, if and as needed, utilities and infrastructure within the project site and within the proposed development footprint. The site is already served by existing utilities that support the existing operations and off-site improvements would be needed.</p>
<p>Policy 19: In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision-making body, as part of its deliberations, will ensure that:</p> <p>(a) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and</p> <p>(b) The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement.</p>	Consistent	<p>The proposed project includes all feasible mitigation measures needed to reduce impacts to air quality to less than significant. The proposed project does not have any significant and unavoidable impacts, thus a statement of overriding considerations is not required.</p>
1.10 General Provisions		
<p>Goal 1: Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from</p>	Consistent	<p>The project may result in a slight increase in employment opportunities in the area; however, these opportunities would not induce substantial population growth.</p>

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
hazardous areas, and assuring the provision of adequate public services.		
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.	Consistent	See the Project Consistency discussion for <i>1.4 Public Services, Goal 1</i> , above.
Policy 12: All methods of sewage disposal and water supply shall meet the requirements of the Kern County Public Health Services Department and the California Regional Water Quality Control Board. The County’s Public Health Services 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 13290-13291.70 (Assembly Bill 885) (2000).	Consistent	The project site currently uses a permitted septic system that meets the Kern County as well as the California Regional Water Quality Control board permitting requirements. The proposed project would be subject to review and ensure conformance with all applicable County Public Health Services Department requirements pertaining to wastewater disposal. The proposed project also uses an existing water well for water supply. The project is not adjacent to any existing large natural water bodies or natural drainages that would be affected by the permitted wastewater disposal and the proposed project would not result in a substantial depletion of groundwater.
Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by California Environmental Quality Act (CEQA) 64 documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.	Consistent	Public service impacts are evaluated in Section 4.17 Public Services , of this EIR. This EIR serves to comply with this policy.
Policy 16: The developer shall assume full responsibility for costs incurred in service extension or improvements that are required to serve the project. Cost sharing or other forms of	Consistent	See the Project Consistency discussion for <i>1.4 Public Services, Goal 1</i> , above.

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
<p>recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.</p>		
1.10.2 Air Quality		
<p>Goal 1: Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.</p>	Consistent	<p>The proposed project is located within an existing developed site that is currently used for composting. The proposed project conforms to all health and safety requirements. The proposed project would add to the local economy by providing continued and expanded composting capacity. The proposed project would not involve any work within a natural resource or hazardous materials area. The proposed project also is served by adequate public services.</p>
<p>Policy 18: The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be placed on minimizing air quality degradation in the desert to enable effective military operations and in the valley region to meet attainment goals.</p>	Consistent	<p>The proposed project would expand the existing composting facility in accordance with the existing and approved CUP. The DEIR considers all applicable air quality measures of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District. The project would include mitigation to reduce impacts as necessary to reduce emissions and impacts to the air basin. The proposed project would not affect the desert environment or any military operations.</p>
<p>Policy 19: In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision-making body, as part of its deliberations, will ensure that:</p> <ul style="list-style-type: none"> a. All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and b. The benefits of the proposed project outweigh any unavoidable significant adverse effects on 	<p>Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-7</p>	<p>As discussed in Section 4.3, Air Quality, of this EIR, the project includes all feasible mitigation measures to reduce significant adverse air quality impacts. With the implementation of such measures, project impacts would be reduced to less than significant.</p>

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
<p>air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.</p>		
<p>Policy 20: The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District on ministerial permits.</p>	Consistent	The project includes Mitigation Measures MM 4.3-1 through MM 4.3-5 , which specifically include measures to reduce fugitive dust.
<p>Policy 21: The County shall support air districts' efforts to reduce PM10 and PM2.5 emissions.</p>	Consistent with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5 , and MM 4.3-7 .	See the Project Consistency discussion for <i>1.10.2, Air Quality</i> , Policy 19, above. Air quality impacts are evaluated in Section 4.3, Air Quality , of this EIR. This EIR serves to comply with this policy.
<p>Policy 22: Kern County shall continue to work with the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District toward air quality attainment with federal, state, and local standards.</p>	Consistent	See the Project Consistency discussion for <i>1.4 Air Quality, Policy 18 through 21</i> , above. In addition, Kern County currently works with and will continue to work with the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District to help ensure projects, including the proposed project, continues to attain federal, state, and local standards.
<p>Policy 23: The County shall continue to implement the local government control measures in coordination with the Kern Council of</p>	Consistent	See the Project Consistency discussion for <i>1.4 Air Quality, Policy 18 through 22</i> , above.

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
Governments and the San Joaquin Valley Unified Air Pollution Control District.		
1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation		
Policy 25: 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.	Consistent with implementation of Mitigation Measures MM 4.5-1 through MM 4.5-2 .	Cultural resource impacts are evaluated in Section 4.5, Cultural Resources , of this EIR. This EIR serves to comply with this policy and includes mitigation measures to promote the preservation of cultural and historic resources where necessary.
1.10.5 Threatened and Endangered Species		
Policy 27: Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.	Consistent	The Draft EIR prepared for the project evaluates impacts to biological resources in Section 4.4 Biological Resources . The EIR serves to comply with State and federal laws and would include mitigation to reduce impacts to special status species or sensitive habitats
Policy 28: County should work closely with state and federal agencies to assure that discretionary projects avoid or minimize impacts to fish, wildlife, and botanical resources.	Consistent with implementation of Mitigation Measures MM-4.4-1 through MM 4.4-12	The project site is in active composting facility operation and thus is substantially disturbed and was historically used for agricultural purposes. The proposed project would expand composting operations into the area previously permitted under the existing CUP. This area is heavily disturbed, routinely disked for weed control, and presents little habitat value and does not contain known sensitive species. In addition, Mitigation Measures MM-4.4-1 through MM 4.4-12 would reduce impacts to less than significant and operation of the project as proposed is consistent with this policy.
Policy 29: 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.	Consistent	See the Project Consistency discussion for <i>1.10.5 Threatened and Endangered Species Policies 27 through 28</i> , above. The proposed project would obtain all necessary permits as needed for potential impacts to species. The project site does not contain any sensitive habitats and would not conflict within this policy.

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
<p>Policy 30: The County will promote public awareness of endangered species laws to help educate property owners and the development community of local, State, and federal programs concerning endangered species conservation issues.</p>	<p>Consistent with implementation of Mitigation Measure MM 4.4-3.</p>	<p>See the Project Consistency discussion for <i>1.10.5 Threatened and Endangered Species Policies 27 through 29</i>, above. The proposed project includes Mitigation Measure MM 4.4-3 which requires employee education related to protection of special status species and training.</p>
<p>Policy 31: 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.</p>	<p>Consistent</p>	<p>As part of the CEQA process the Notice of Preparation was sent to the California Department of Fish and Game and the U.S. Fish and Wildlife Service for review and comment. The agencies also will be notified of and sent a copy of this Draft EIR. The County would review all comments and revise the Draft EIR as needed based on these and all other comments related to biological resources.</p>
<p>Policy 32: 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.</p>	<p>Consistent</p>	<p>See the Project Consistency discussion for <i>1.10.5 Threatened and Endangered Species Policies 27 through 29</i>, above. The project site does not contain and would not disturb any riparian habitat or other habitat areas that would be under the jurisdiction of the United States Army Corps of Engineers or the California Department of Fish and Game. The project would not substantially affect any flood area, biological resources, or recreational areas.</p>
<p>1.10.6 Surface Water and Groundwater</p>		
<p>Policy 34: Ensure that water quality standards are met for existing users and future development.</p>	<p>Consistent</p>	<p>See the Project Consistency discussion for <i>1.9 Resource (Map Code 8.1 and 8.3) Policy 11</i>, above. The proposed project would not have substantial effects to water quality, would include all required water quality protection measures and standards to ensure water quality is not substantially degraded.</p>
<p>Policy 39: Encourage the development of the County’s ground water supply to sustain and ensure water quality and quantity for existing</p>	<p>Consistent</p>	<p>The proposed project uses water from an existing permitted groundwater well. The proposed project would not result in significant development</p>

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
users, planned growth, and maintenance of the natural environment.		and would not result in a substantial increase in demand for ground water usage.
Policy 41: Review development proposals to ensure adequate water is available to accommodate projected growth.	Consistent	See the Project Consistency discussion for <i>1.10.6 Surface Water and Groundwater Policy 34 and 39</i> , above.
Policy 43: Drainage shall conform to the Kern County Development Standards and the Grading Ordinance	Consistent with implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2 .	Drainage plans and associated impacts are discussed in Section 4.10, Hydrology and Water Quality , of this EIR. Consistent with this policy, final project design would be required to conform to the Kern County Development Standards and Grading Ordinance. Mitigation Measure MM 4.10-1 and MM 4.10-2 would minimize direct impacts on erosion, drainage, and flooding.
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, to prevent the degradation of the watershed to the extent practical.	Consistent with implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2	Please refer to Section 4.10, Hydrology and Water Quality , of this EIR, for a complete discussion of potential watershed impacts resulting from the proposed project. Implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2 would minimize direct impacts on erosion, drainage, and flooding.
Policy 46: In accordance with the Kern County Development Standards, tank truck hauling of domestic water for land developments or lots within new land developments is not permitted.	Consistent	See the Project Consistency discussion for <i>1.10.6 Surface Water and Groundwater Policy 39</i> , above.
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.	Consistent	The project site has been operating under an approved CUP for a composting facility since 2006. In addition, the proposed project includes modification of the CUP to address continued and expanded operations of the compost facility and will continue to ensure that light and glare are minimized.

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
Policy 48: Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties	Consistent	See the Project Consistency discussion for <i>1.10.7 Light and Glare, Policy 47</i> , above.
Chapter 2 Circulation Element		
Goal 4: Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.	Consistent	The proposed project includes a site design and would occur within a highly disturbed area to minimize environmental effects. In addition, the proposed project includes mitigation measures to further reduce impacts.
Goal 5: Maintain a minimum Level of Service (LOS) D for all roads throughout the County unless the roads are part of an adopted Community Plan or Specific Plan which utilizes Smart Growth policies that encourage efficient multi-modal movements.	Consistent	The proposed project would continue being used for composting and would not substantially increase vehicle trips. The number of trips would be in conformance with those previously approved under the existing CUP. In addition, the majority of new trips would occur on South Lake Road and other rural roadways that do not have heavy traffic loads.

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
2.3.3 Highway Plan		
Goal 5: Maintain a minimum LOS D.	Consistent	The proposed project would not reduce the LOS below level D.
Policy 1: Development of roads within the County shall be in accordance with the Circulation Diagram Map. The chartered roads are usually on section and midsection lines. This is because the road centerline can be determined by an existing survey.	Consistent	The project does not propose any road construction and would not require any changes to or affect roadway operations.
Policy 3: The 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.	Consistent	See the Project Consistency discussion for <i>2.3.3 Highway Plan Goal 5 and Policy 1</i> , above. The project would not result in any new road construction.
Expressway [Four Travel Lanes] Minimum 110-foot right-of-way; Arterial [Major Highway] Minimum 110-foot right-of-way; Collector [Secondary Highway] Minimum 90-foot right-of-way; Commercial-Industrial Street Minimum 60-foot right-of-way; and Local Street [Select Local Road] Minimum 60-foot right-of-way.		
2.3.4 Future Growth		
Goal 1: To provide ample flexibility in this plan to allow for growth beyond the 20-year planning horizon.	Consistent	The proposed project is responsive to anticipated growth in the region as it would increase the scope and scale of composting operations in accordance with the previously approved CUP. The proposed project also would provide compost product to support future demand and to be consistent with California state laws.

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
<p>Policy 2: The County should monitor development applications as they relate to traffic estimates developed for this plan. Mitigation is required if development causes affected roadways to fall below LOS D. Utilization of the California Environmental Quality Act (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 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 to an acceptable level.</p>	Consistent	<p>See the Project Consistency discussion for 2.3.3 <i>Highway Plan Goal 5, and Policy 1 and 3</i>, above. The proposed project would not result in any new road construction, would not substantially affect LOS on existing roadways, and would not require mitigation to reduce effects to transportation.</p>
<p>Policy 4: As a condition of private development approval, developers, shall build roads needed to access the existing road network. Developers shall build these roads to County standards unless improvements along state routes are necessary then roads shall be built to California Department of Transportation (Caltrans) standards. Developers shall locate these roads (width to be determined by the Circulation Plan) along centerlines shown on the circulation diagram map unless otherwise authorized by an approved Specific Plan Line. Developers may build local roads along lines other than those on the circulation diagram map. Developers would negotiate necessary easements to allow this.</p>	Consistent	<p>See the Project Consistency discussion for 2.3.3 <i>Highway Plan Goal 5, Policy 1, 3, and 2.3.4; and, Future Growth Policy 1 and 2</i> above.</p>

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
<p>Policy 5: When there is a legal lot of record, improvement of access to County, city or State roads will require funding by sources other than the County. Funding could be by starting a local benefit assessment district or, depending on the size of a project, direct development impact fees.</p>	Consistent	<p>See the Project Consistency discussion for 2.3.3 Highway Plan Goal 5, Policy 1, 3, and 2.3.4; and, Future Growth Policy 1 and 2 above.</p>
<p>Policy 6: The County may accept a developer’s road into the County maintained road system. This is at Kern County’s discretion. Acceptance would occur after the developer follows the above requirements. Roads are included in the County road maintenance system through approval by the Board of Supervisors.</p>	Consistent	<p>See 2.3.3 Highway Plan Goal 5, Policy 1, 3, and 2.3.4; and, Future Growth Policy 1 and 2 above.</p>
2.3.9 Scenic Route Corridors		
<p>Goal 1: To safeguard property values while improving the County’s image</p>	Consistent	<p>The proposed project does not include any roadway improvements and would not contribute a substantial volume of traffic to existing roadways such that the image of the County would be harmed.</p>
<p>Goal 3: To preserve a network of scenic routes interconnection much of the scenic land in the County. Benefits from the establishment of scenic corridor protection measures will accrue to the County as a whole.</p>	Consistent	<p>The proposed project is not located along a scenic corridor and would not affect any scenic route or substantially detract from any scenic visual resource.</p>
2.5.1 Trucks and Highways		
<p>Goal 1: Provide for Kern County’s heavy truck transportation in the safest way possible.</p>	Consistent	<p>The proposed project would result in an increase in truck trips on roadways that are already used to enable operation of the existing composting facility under the existing approved CUP. All trucks would be operated in accordance with federal, state, and local regulations and project operations would not negatively affect safety of the existing roadways.</p>

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
Goal 2: Reduce potential overweight trucks.	Consistent	The proposed project would not result in an increase of the load weights of trucks transporting composting materials. The proposed project would operate under the conditions of the existing approved CUP.
Goal 3: Use State Highway System improvements to prevent truck traffic in neighborhoods.	Consistent	The proposed project would use the State Highway System and rural roadways to transport composting materials. The project site is not in proximity to any neighborhoods and would not increase truck trips through residential areas.
Policy 1: Caltrans should be made aware of the heavy truck activity on Kern County’s roads.	Consistent	Kern County and the project proponent will make the necessary notifications to Caltrans if heavy trucks are needed to expand or continue operations on the project site.
Policy 2: Start a program that monitors truck traffic operations.	Consistent	A transportation study was prepared for the proposed project and anticipated trips would be conform with what is allowed under the existing approved CUP.
Policy 3: Promote a monitoring program of truck lane pavement conditions.	Consistent	Kern County would continue to monitor the conditions of roadways used for transporting composting materials and products to and from the project site including South Lake Road, Hill Road, Millux Road, and Old River Road.

2.5.4 Transportation of Hazardous Materials

Goal 1: Reduce risk to public health from transportation of hazardous materials	Consistent	Section 4.9, Hazards and Hazardous Materials , of this EIR provides a discussion of Hazardous Materials Transportation and existing regulatory requirements of the California Vehicle Code that pertain to transport of hazardous materials and wastes. This EIR serves to comply with this policy.
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Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
<p>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.</p>	Consistent	<p>See the Project Consistency discussion for 2.5.4 <i>Transportation of Hazardous Materials, Goal 1</i> above.</p>
<p>Policy 2: Kern County and affected cities should reduce use of County-maintained roads and city-maintained streets for transportation of hazardous materials.</p>	Consistent	<p>The proposed project would not involve the transportation of acutely hazardous materials or substantially increase the transportation of other potentially hazardous materials. Some commonly used materials, such as fuels, oils, and lubricants would be transported to enable continued operation of the composting facility under the existing approved CUP. All transportation and use of such materials within the project site would be done in accordance with all applicable regulations and safe handling standards.</p>
Chapter 3 Noise Element		
<p>Goal 1: Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.</p>	Consistent	<p>Noise impacts, sensitive receptors and County thresholds are evaluated in Section 4.13, Noise, of this EIR. The nearest sensitive receptors are located approximately 1.5 miles to the northeast and would not be affected by continued operations. There are no other noise sensitive uses in proximity to the project. This EIR serves to comply with this policy.</p>
<p>Goal 2: Protect the economic base of Kern County by preventing the encroachment of incompatible land uses near known noise producing roadways, industries, railroads, airports, oil and gas extraction, and other sources.</p>	Consistent	<p>The proposed project includes an expansion of an existing composting facility that provides an economic benefit and revenue to the County. The proposed project would occur within an area designated and zoned for industrial uses and surrounding by other industrial uses including a solar installation and petroleum facility. The proposed project would not generate substantial noise and would not preclude continued or future operations of any of the uses that would add to the economic base of the County.</p>

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
Policy 1: Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.	Consistent	See the Project Consistency discussion for <i>Chapter 3, Noise Element, Goal 1</i> , above.
Policy 2: Require noise level criteria applied to all categories of land uses to be consistent with the recommendations of the California Division of Occupational Safety and Health.	Consistent	See the Project Consistency discussion for <i>Chapter 3, Noise Element, Goal 1</i> , above.
Policy 3: Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise.	Consistent	The proposed project is approximately 0.25 miles from South Lake Road and is not located near any sensitive land uses or sensitive receptors. The composting area would be encircled by an existing and expanded berm that would further reduce the minimal noise generated by operations.
Policy 4: Utilize good land use planning principles to reduce conflicts related to noise emissions.	Consistent	See the Project Consistency discussion for <i>Chapter 3, Noise Element, Goal 1</i> , above.
Policy 6: Ensure that new development in the vicinity of airports will be compatible with existing and projected airport noise levels as set forth in the ALUCP.	Consistent	The proposed project would expand the existing composting facility within the area of the approved CUP. The project site is not located in proximity to any airport and is not subject to any ALUCP.
Policy 7: Employ the best available methods of noise control.	Consistent	See the Project Consistency discussion for <i>Chapter 3, Noise Element, Goal 1</i> , above.
Chapter 4 Safety Element		
Goal 1: Minimize injuries and loss of life and reduce property damage.	Consistent	Consistent with this goal, the project would be required to comply with adopted safety regulations, such as the Fire Code, and related policies in the General Plan.
Goal 2: Reduce economic and social disruption resulting from earthquakes, fire, flooding, and other geologic hazards by assuring the continuity of vital emergency public services and functions.	Consistent	The proposed project would expand the existing composting facility in accordance with the approved CUP. The project does not include any residential development or include new habitable structures and would

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
		not include any uses that would reduce economic or social disruption resulting from earthquake or geologic hazard, fire, or flooding hazard.
Goal 5: Ensure the availability and effective response of emergency services following a catastrophic event.	Consistent	The proposed project is located in a relatively unpopulated area and would not substantially affect any emergency response or affect the ability of emergency responders to access any other area.
Goal 7: Ensure that adequate emergency services and facilities are available to the residents of Kern County through the coordination of planning and development of emergency facilities and services.	Consistent	See the Project Consistency discussion for <i>Noise Element, Goal 5</i> , above. The proposed project would not impact that County's ability to provide emergency services to the project site or any other area or impact any emergency services facility.
Goal 8: Reduce the public's exposure to fire, explosion, blowout, and other hazards associated with the accidental release of crude oil, natural gas, and hydrogen sulfide gas.	Consistent	The proposed project does not include any uses involving crude oil, natural gas, or hydrogen sulfide gas. The proposed project would not increase any person's exposure to these elements.
4.3 Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure		
Policy 1: The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.	Consistent	See the Project Consistency discussion for <i>1.3 Physical and Environmental Constraints Policy 1, and Policy 3, and Chapter 4 Safety Element Goal 2</i> above. The proposed project is not located in an active fault zone.
4.5 Landslides, Subsidence, Seiche, and Liquefaction		
Policy 1: Determine the liquefaction potential at sites in areas of shallow groundwater (Map Code 2.3) prior to discretionary development and determine specific mitigation to be incorporated into the foundation design, as necessary, to prevent or reduce damage from liquefaction in an earthquake.	Consistent	See the Project Consistency discussion for <i>1.3 Physical and Environmental Constraints Policy 1, and Policy 3, and Chapter 4 Safety Element Goal 2</i> above. The proposed project is not at substantial risk from liquefaction.
Policy 3: Reduce potential for exposure of residential, commercial, and industrial	Consistent	See the Project Consistency discussion for <i>1.3 Physical and Environmental Constraints Policy 1, and Policy 3, and Chapter 4 Safety</i>

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
development to hazards of landslide, land subsidence, liquefaction, and erosion.		<i>Element Goal 2</i> above. The proposed project is not at substantial risk from landslides, subsidence, liquefaction, or erosion.
4.6 Wildland and Urban Fire		
Policy 1: Require discretionary projects to assess impacts on emergency services and facilities.	Consistent	Impacts on emergency services and facilities are discussed in Section 4.14, Public Services , of this EIR. This EIR serves to comply with this policy.
Policy 2: The County will encourage the promotion of public education about fire safety at home and in the work place.	Consistent	The project would not interfere or prohibit the County’s ability to meet this policy. The project would be required to develop a fire safety plan for use during construction and operational activities. All on-site employees would be trained on fire safety and how to respond to on-site fires, should they occur. See Section 4.9, Hazards and Hazardous Materials , and Section 4.14, Public Services , of this EIR.
Policy 3: The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.	Consistent	See the Project Consistency discussion for <i>Chapter 4, Safety Element, Policy 2</i> , above.
Policy 4: Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.	Consistent	The project would not physically impede the existing emergency response plans, emergency vehicle access, or personnel access to the site. The project site and its vicinity are accessible via a South Lake Road and the project site is directly accessible by Santiago Road. These roadways would provide adequate egress/ ingress to the site in the event of an emergency. The project does not include a residential component and would have 60 employees at full operation. Adequate roadway volume exists to facilitate evacuation should it be required. Therefore, no adverse impacts related to impairment of the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan is anticipated. The project proponent would update their current fire safety plan for use during construction and operation.

Table 4.11-3: Consistency Analysis with Kern County General Plan Policies for Land Use

Policies	Consistency Determination	Project Consistency
Policy 6: All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.	Consistent	Consistent with this policy, the project would be required to comply with the adopted Fire Code and the requirements of the Kern County Fire Department.
4.9 Hazardous Materials		
Policy 2: Innovative technologies to manage hazardous waste streams generated in Kern County will be encouraged.	Consistent	The proposed project would continue operations of a composting facility. The project does not use, store, or handle any acutely hazardous materials.

Project Consistency with the South Kern Industrial Center Specific Plan (SKICSP)

Table 4.11-4: Consistency Analysis with the South Kern Industrial Center Specific Plan

Goals and Policies	Consistency Determination	Project Consistency
General Overview		
Goal 3: To promote the health, safety, and welfare relative to the exposure of population from adverse conditions that may be attributed to the heavy industrial users.	Consistent	Consistent with this goal, the proposed project will facilitate the continued use of the existing compost facility. This is compatible with this goal as it will continue to provide a safe operation of a heavy industrial use that will not compromise the welfare of the local population. The proposed project would not result in any conflicts with the current surrounding uses or the continued use of those areas.
Policy 4: All proposed projects shall be consistent with the Kern County General Plan and this Specific Plan, as required by the State of California Government Code. All projects shall adhere to the Kern County Zoning Ordinance, except as modified herein. This does not preclude requests for modifications, variances, and conditional use permits as provided in the Kern County Zoning Ordinances, except for the limitations of uses and development standards as provided within this document.	Consistent	The proposed project is consistent with existing land use designation of the Kern County General Plan and Kern County Zoning Ordinance. As the South Kern Industrial Center Specific Plan is consistent with both those documents, and the project is similarly consistent with the SKICSP, it is consistent with this policy.
Policy 7: Any and all construction requiring a building permit shall conform to the standards set forth in this Specific Plan, with compliance to the Kern County Code of Building Regulations and all other applicable codes adopted by Kern County.	Consistent	The proposed project would expand an existing composting facility that was previously approved under an existing CUP. The existing CUP is consistent with the South Kern Industrial Center Specific Plan. The proposed project, however, does not include construction of new structures but includes installation of new equipment to enable processing of the expanded feedstocks in accordance with State law.
Policy 8: Construction or alteration of structures or other improvements requiring a building permit shall not be allowed until the necessary	Consistent	See the Project Consistency discussion for <i>Section 1 General Overview Policy 7</i> , above.

Table 4.11-4: Consistency Analysis with the South Kern Industrial Center Specific Plan

Goals and Policies	Consistency Determination	Project Consistency
plans and studies, have been approved by Kern County Planning Department as required for building permit approval.		
Policy 9: All fences, hedges, and walls shall conform to the requirements of the Kern County Zoning Ordinance except where the approved requirements of the Specific Plan's jurisdiction are more restrictive. In such cases, the requirements of the Specific Plan shall be used.	Consistent	The proposed project is located approximately 0.25 miles from South Lake Road. The existing dirt berm surrounding the existing operations would be extended around the new composting area. This feature of the project conforms to all requirements of the Kern County Zoning Ordinance and South Kern Industrial Center Specific Plan.
Policy 10: Prior to the issuance of any development or use permit, the County shall make the finding, based on information provided by CEQA environmental documents, staff analysis, and the applicant, that adequate public and private services are available to serve the proposed development.	Consistent	The proposed project has been evaluated pursuant to State CEQA guidelines including an analysis of potential impacts to both public and private services. The analysis found that adequate services exist to serve the proposed project.
Policy 11: All methods of sewage disposal and water supply within the Specific Plan Area shall meet or exceed the requirements of the Kern County Department of Environmental Health Services and the California Regional Water Quality Board.	Consistent	The proposed project is served by and obtains potable water from existing water wells and uses an existing and permitted septic system. The proposed project would meet the requirements of the Kern County Department of Environmental Health Services and the California Regional Water Quality Board.
Policy 12: Should any archaeological or historic resource be unearthed during construction, work shall be halted in the area of the discovery until the finds can be assessed by a qualified and certified archaeologist, approved by the County of Kern, so that appropriate mitigation measures to preserve the find can be carried out.	Consistent with implementation of Mitigation Measures MM 4.5-1 and MM 4.5-2	Cultural resource impacts are evaluated in Section 4.5, Cultural Resources , of this EIR. This EIR serves to comply with this policy and includes Mitigation Measures MM 4.5-1 and 4.5-2 that would provide for the protection and preservation of cultural and historic resources. Mitigation also includes a provision related to the inadvertent discovery of archeological resources.
Land Use Element		

Table 4.11-4: Consistency Analysis with the South Kern Industrial Center Specific Plan

Goals and Policies	Consistency Determination	Project Consistency
Goal 1: To encourage well-planned industrial development which is compatible with the adjacent land uses.	Consistent	Consistent with this policy, the project includes the expansion and continued operation of an existing composting facility under an existing CUP. The project site is not located on a hazardous site and does not include any uses that would exacerbate any existing geological hazards. See Section 4.8, Hazards and Hazardous Materials , of this EIR.
Goal 4: To promote economic strength while observing inherent environmental limitations and physical constraints that could potentially affect the viability of the Specific Plan area.	Consistent	The proposed project includes an expansion of an existing composting facility that provides an economic benefit and revenue to the County. The proposed project would occur within highly disturbed areas and would not result in substantial effects on sensitive environmental resources. The proposed project is consistent with the intent and designated uses of the South Kern Industrial Complex and would not reduce the viability of using the remaining areas for their intended uses.
Policy 2: Development and Improvements are subject to Site Plan Review Processing Guidelines found in this plan (Appendix A) prior to issuance of a development permit.	Consistent	Consistent with this policy, no portion of the project site is located in Map Code designations 2.1 (Seismic Hazard). The project site would be located in an area with Map Code designation 2.5 (Flood Hazard) but the project does not propose any new habitable structures, nor would it result in new buildings and expose a substantial number of people to flooding hazards. Hydrology impacts are evaluated in Section 4.10, Hydrology and Water Quality , of this EIR, seismic hazards are described and analyzed in Section 4.7, Geology and Soils , of this EIR. The project site is not located on land with any other type of hazard designation. With approval of the modified CUP, the project would comply with Policy 1.
Policy 9: Encourage improving the visual character of heavy manufacturing and industrial areas through the use of landscaping and screening of storage areas.	Consistent	See the Project Consistency discussion for <i>1.3 Physical and Environmental Constraints, Goal 1</i> above.
Policy 10: Evaluate the potential noise impacts of any development requiring discretionary approval and require that mitigation measures be	Consistent with implementation of Mitigation Measure MM	Hydrology impacts are evaluated in Section 4.10, Hydrology and Water Quality , of this EIR. The site is identified with a Zone A special flood hazard area (SFHA) (FEMA, 2008). SFHA’s Zone A are defined as the area that will be inundated by the flood event having a 1-percent chance of

Table 4.11-4: Consistency Analysis with the South Kern Industrial Center Specific Plan

Goals and Policies	Consistency Determination	Project Consistency
incorporated where significant adverse effects are identified.	4.10-1 and MM 4.10-2.	being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood (FEMA, 2020). While the project site is in this zone, no habitable structures are proposed by the project. The existing and expanded composting areas and ancillary uses would have a minimal effect on floodplain capacity as there are large areas of pervious surfaces that would absorb stormwater runoff. Mitigation Measures MM 4.10-1 and MM 4.10-2 would minimize direct impacts on erosion, drainage, and flooding.
Policy 11: Proposed industrial development must demonstrate adequacy of the planned water and sewer facilities	Consistent with implementation of Mitigation Measures MM 4.10-1 and MM 4.10-2.	See the Project Consistency discussion for <i>1.3 Physical and Environmental Constraints, Policy 8</i> , above. Also see Section 4.10, Hydrology and Water Quality , of this EIR. Because the proposed project would not significantly alter the existing topography or change the nature of any flood flow conveyance. The proposed project would not increase the potential for flooding beyond existing conditions. Flooding in this location would not result in a safety hazard, as the proposed project would not establish a new permanent population on-site. Further, the project would be developed in accordance with the General Plan and Floodplain Management Ordinance.
Policy 14: Coordinate all industrial use activities in the Plan area with an effective Circulation Plan that provide adequate circulation in and around the site and promotes transportation safety.	Consistent	The proposed project does not include road construction, would not require any changes to or affect roadway operations, and would not change roadway alignments affecting transportation safety. The proposed project would not contribute a substantial volume of traffic to existing roadways. The proposed project would continue being used for composting and the increased vehicle trips would be consistent with the existing circulation systems.
Circulation Element		
Goal 1: To minimize the vehicle miles travelled to the greatest extent possible.	Consistent	The proposed project would continue being used for composting and would not substantially increase vehicle trips or vehicle miles travelled. The number of trips would be in conformance with those previously approved under the existing CUP. In addition, the majority of new trips

Table 4.11-4: Consistency Analysis with the South Kern Industrial Center Specific Plan

Goals and Policies	Consistency Determination	Project Consistency
Goal 2: To maintain public safety and efficient routes for anticipated traffic patterns.	Consistent	would occur on South Lake Road and other rural roadways that do not have heavy traffic loads.
Policy 2: Encourage the use of public transportation and other alternative modes of transportation (i.e. employee vanpools and carpools), wherever possible, to reduce the amount of vehicle trips to and from the Specific Plan Area.	Consistent	See the Project Consistency discussion for <i>Circulation Element Goal 1, Goal 2</i> , above. The project applicant would encourage carpooling and ridesharing between employees as feasible.
Public Facilities and Services Element		
Goal 3: To provide for the coordinated planning and development of the Specific Plan Area police/security and fire services.	Consistent	As described in Section 4.14, Public Services , of this EIR, while the proposed project would not increase the footprint of the site, it would not result in a substantial increase in the number of employees on-site, many of whom would be transient through the site delivering materials to be composted and transported composted materials to retailers and some end users. Thus, there would be no need to increase police and fire protection services or expand any current facilities. Overall the demand for police and fire protection services would remain similar to existing conditions and, thus, this project would be consistent with this goal.
Policy 1: Strengthen the existing procedures for planning and coordinating the required infrastructure utilities, facilities, and services for the site.		See the Project Consistency discussion for <i>Public Facilities and Services Element, Policy 1</i> , above.
Policy 2: Utilize financing methodologies which enable the installation of improvements and	Consistent	See the Project Consistency discussion for <i>Public Facilities and Services Element, Policy 1</i> , above. The proposed project would not require

Table 4.11-4: Consistency Analysis with the South Kern Industrial Center Specific Plan

Goals and Policies	Consistency Determination	Project Consistency
infrastructure which otherwise would be economically infeasible for the individual developer to construct.		installation of new off-site improvements or infrastructure and would be use existing water wells and septic systems.
Environmental Resource Management Element		
Goal 1: To ensure and protect a safe and adequate supply of water for the Specific Plan area.	Consistent	The proposed project uses water from an existing permitted groundwater well. The proposed project would not result in significant development and would not result in a substantial increase in demand or use of ground water.
Goal 2: To ensure that all land uses within the Specific Plan area are adequately protected from flood hazards and problems related to surface water drainage.	Consistent with implementation of Mitigation Measures MM 4.10-1 and MM4.10-2	Drainage plans and associated impacts are discussed in Section 4.10, Hydrology and Water Quality , of this EIR. Consistent with this policy, final project design would be required to conform to the Kern County Development Standards and Grading Ordinance. Mitigation Measures MM 4.10-1 and MM 4.10-2 would minimize direct impacts on erosion, drainage, and flooding.
Goal 3: To provide for adequate, safe, and cost-effective disposal of wastewater.	Consistent	The project site currently uses a permitted septic system that meets Kern County as well as the California Regional Water Quality Control board permitting requirements. The proposed project would be subject to review conformance with all applicable County Public Health Services Department requirements pertaining to wastewater disposal as well as use of well(s) for water supply. The project is not adjacent to any existing large natural water bodies or natural drainages that would be affected by the permitted wastewater disposal.
Goal 4: To minimize the impacts that will be created by the heavy industrial uses.	Consistent	As discussed, throughout the various chapters of the Draft EIR, the proposed project includes all feasible mitigation measures to reduce significant adverse environmental impacts. With the implementation mitigation measures proposed in the EIR, project impacts would be reduced to the extent feasible. All impacts other than cumulative air quality impacts would be less than significant.

Table 4.11-4: Consistency Analysis with the South Kern Industrial Center Specific Plan

Goals and Policies	Consistency Determination	Project Consistency
Policy 1: Promote the conservation of renewable and non-renewable natural resources and encourage development and land uses which are compatible with conditions affecting the site.	Consistent	The project site has been operating under an approved CUP for a composting facility since 2006. The proposed project includes a modification to the currently approved CUP and would enable use of expanded feedstocks and increase the sites capacity for recycling of green waste and reduce use of traditional landfills.
Policy 2: Encourage soil management and conservation techniques where erosive soil conditions exist.	Consistent	The project site is flat and does not contain any natural drainages. The proposed project would not result in substantial changes to the topography or drainage patterns and would include water quality mitigation, to comply with the National Pollution Discharge Elimination System Permitting (NPDES) process by incorporated a Stormwater Pollution Prevention Plan (SWPPP) with best management practices (BMPs). This would minimize erosion and siltation of any downstream receiving waters or off-site areas. The proposed project would continue to utilize the existing detention basin on northerly side of the project site.
Policy 4: Minimize the potential impacts caused by the potential flooding condition.	Consistent with implementation of Mitigation Measures MM 4.10-1 and MM4.10-2	Drainage plans and associated impacts are discussed in Section 4.10, Hydrology and Water Quality , of this EIR. Consistent with this policy, final project design would be required to conform to the Kern County Development Standards and Grading Ordinance. Mitigation Measure MM 4.10-1 and MM 4.10-2 would minimize direct impacts on erosion, drainage, and flooding.
Policy 6: Incorporate standards established in the Kern County Air Quality Maintenance Plan.	Consistent	The proposed project considers all applicable air quality measures of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District. The proposed project would include mitigation to reduce impacts or violate standards set forth in the Kern County Air Quality Maintenance Plan.

Table 4.11-4: Consistency Analysis with the South Kern Industrial Center Specific Plan

Goals and Policies	Consistency Determination	Project Consistency
<p>Policy 8: Archaeologically, culturally, and biologically sensitive areas shall be protected, wherever feasible.</p>	<p>Consistent with implementation of Mitigation Measures MM 4.4-1 and MM4.4-12</p>	<p>The EIR prepared for the proposed project evaluates impacts to biological resources in Section 4.4, Biological Resources. The EIR serves to comply with State and federal laws and would include mitigation to reduce impacts to special status species or sensitive habitats.</p> <p>The project site is an active composting facility operation and thus is substantially disturbed and was historically used for agricultural purposes. The project site does not contain known sensitive species. In addition, Mitigation Measures MM 4.4-1 through MM 4.4-12 would reduce impacts to less than significant and operation of the project as proposed is therefore consistent with this policy.</p>
<p>Seismic Safety Element</p>		
<p>Goal 1: To encourage precautionary measures which significantly reduce loss of life, bodily injury and property damage resulting from potential hazardous occurrences.</p>	<p>Consistent</p>	<p>The project does not include any residential development or include new habitable structures that would result in increased risks to human health and safety from earthquake or geologic hazard, fire, or flooding hazard. In addition, the proposed project would not involve the transportation of acutely hazardous materials. The proposed project would involve the routine use of commonly used materials, such as fuels, oils, and lubricants. All use, handling, and disposal of these materials would occur in accordance with all regulations and safe handling standards.</p>
<p>Goal 3: To assure that fire hazardous materials regulation and emergency medical service problems are continuously identified and addressed in a pro-active way in order to optimize safety and efficiency.</p>	<p>Consistent</p>	<p>The propose project is not located in a hazardous fire area and does not include the handling of any acutely hazardous materials. All commonly used fuels, greases, lubricants, and cleaning agents will be stored safely and in accordance with manufacturers specifications. No changes in these operational procedures are anticipated, but if additional materials are uses, handled or stored, it would be in accordance with an amended HMPBP.</p>
<p>Goal 4: To minimize the hazards to public health, safety, and welfare that results from natural and man-made phenomena.</p>	<p>Consistent</p>	<p>See the Project Consistency discussion for <i>Seismic Safety Element, Goal 1</i>, above. The proposed project also would not exacerbate any existing geologic hazard, is not located in an Alquist Priolo fault zone, and would conform to all regulations intended to preserve human health and safety.</p>

Table 4.11-4: Consistency Analysis with the South Kern Industrial Center Specific Plan

Goals and Policies	Consistency Determination	Project Consistency
Policy 1: Minimize the environmental, economic, and social impacts stemming from hazardous occurrences such as fire, flood, earthquake, and hazardous materials.	Consistent	See the Project Consistency discussion for <i>Seismic Safety Element, Goal 1, Goal 4, and Policy 1</i> , above. The project site is not located in fire hazard zone and would not erect any new habitable structures in a floodzone. The proposed project would expand environmentally beneficial composting activities and increase jobs and revenue to the County.
Policy 2: Promote company education regarding matters of fire, hazardous materials and other safety issues incidental to the safe and orderly execution of jobs in the workplace.	Consistent	See the Project Consistency discussion for <i>Seismic Safety Element, Goal 1, Goal 4, Policy 1, and Policy 3</i> , above. In addition, the proposed will include an education program for workers related to the safe completion of their tasks and uses of materials and equipment on the project site. All workers will have access to the HMBP.
Policy 3: Protect plan Area workers from the risk of injury and property damage that could potentially result from fire hazards, geologic hazards, exposure to potentially hazardous substances.	Consistent	See the Project Consistency discussion for <i>Seismic Safety Element, Goal 1, Goal 4, Policy 1, and Policy 3</i> , above.
Policy 6: Develop procedures for the review of the proposed facility which use, manufacture, and/or store hazardous materials.	Consistent	See the Project Consistency discussion for <i>Seismic Safety Element, Goal 1, Goal 4, Policy 1, and Policy 3</i> , above. The propose project would not include the handling, storage, use, or disposal of acutely hazardous materials.
Policy 7: Enforce Ordinances regulating the use, manufacturing, sale, storage, transport and disposal of hazardous materials.	Consistent	See the Project Consistency discussion for <i>Seismic Safety Element, Goal 1, Goal 4, Policy 1, Policy 2, 3, and 6</i> , above.
Policy 8: Ensure adequate fire protection within the Specific Plan Area and the surrounding areas in order to guard against potential hazards from fire.	Consistent	See the Project Consistency discussion for <i>Seismic Safety Element, Goal 3</i> , above. The proposed project would include all applicable fire safety designs and provide adequate access should emergency services be required.
Policy 9: Establish and enforce programs for reduction of hazardous and geologic risks.	Consistent	See the Project Consistency discussion for <i>Seismic Safety Element, Goal 1, Goal 4, Policy 1, and Policy 3</i> , above.

Table 4.11-4: Consistency Analysis with the South Kern Industrial Center Specific Plan

Goals and Policies	Consistency Determination	Project Consistency
Noise		
Goal 1: To maintain Noise level standards required by the Noise Element of the Kern County General Plan for heavy Industrial/manufacturing land uses.	Consistent	The proposed project includes a composting facility that would not generate a substantial volume of noise. The proposed project is located approximately 0.25 miles from South Lake Road and would be surrounded by berm that would help reduce noise that may be audible off-site. There are no sensitive land uses in proximity to the project site or that would be affected by project generated noise and would be consistent with the noise element.
Goal 2: To protect adjacent land uses from the potentially harmful effects of exposure to excessive noise.	Consistent	See the Project Consistency discussion for <i>Seismic Safety Element Noise Goal 1</i> , above.
Policy 2: Require that noise level criteria for the heavy industrial land use be consistent with the Noise Element of the Kern County General Plan.	Consistent	See the Project Consistency discussion for <i>Seismic Safety Element Noise Goal 1</i> , above.

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Section 4.12 Mineral Resources

4.12.1 Introduction

This section of the EIR describes the affected environment and regulatory setting for mineral resources. It also describes the impacts on mineral resources that would result from implementation of the project, and mitigation measures that would reduce these impacts, if applicable. Information used in the preparation of this section includes the California Department of Conservation California Geological Survey (CGS), California Geologic Energy Management Division (CalGEM) [formerly the California Division of Oil, Gas, and Geothermal Resources (DOGGR)], South Kern Industrial Center Specific Plan (SKICSP), this EIR, and Kern County publications and maps as cited throughout this section.

4.12.2 Environmental Setting

Public policy is that the nonrenewable characteristic of mineral deposits necessitates the careful and efficient development of mineral resources in order to prevent the unnecessary waste of these deposits due to careless exploitation and uncontrolled urbanization. Management of these mineral resources will protect not only future development of mineral deposit areas but will also limit the exploitation of mineral deposits so that adverse impacts caused by mineral extraction will be reduced or eliminated. This section discusses the existing conditions related to mineral resources within the project area, including the project site.

Regional Setting

Mineral and petroleum resources are basic to Kern County's economy; Kern County is one of the top producers of oil in the United States (Kern County Economic Development Corporation, 2021). In addition, borax, cement and construction aggregates constitute major economic mineral resources. The Surface Mining and Reclamation Act of 1975 (SMARA) requires the State Geologist to classify land into Mineral Resource Zones (MRZs) according to its known or inferred mineral potential. The State Geologist has classified 2,971 square miles of land in Kern County as MRZs of varying significance. Mineral resources in Kern County include numerous mining operations that extract a variety of materials, including sand and gravel, stone, gold, dimensional stone, limestone, clay, shale, gypsum, pumice, decorative rock, silica, and specialty sand. Significant mineral resources located in southern Kern County include Portland Cement Concrete-Grade Aggregate, antimony, silver, and gold. The MRZ categories are defined as follows (Department of Conservation, 1999):

- **MRZ-1:** Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- **MRZ-2a:** Areas underlain by mineral deposits where geologic data indicate that significant measured or indicated resources are present. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves. Land included in MRZ-2a is

of prime importance because it contains known economic mineral deposits.

- **MRZ-2b:** Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present.
Areas classified MRZ-2b contain inferred mineral resources as determined by their lateral extension from proven deposits or their similarity to proven deposits. Further exploration could result in upgrading areas classified MRZ-2b to MRZ-2a.
- **MRZ-3a:** Areas containing known mineral occurrences of undetermined economic significance. Further exploration could result in reclassification of all or part of these areas into the MRZ-2a or MRZ-2b categories.
- **MRZ-3b:** Areas containing inferred mineral occurrences of undetermined economic significance. Further exploration could result in the reclassification of all or part of these areas into the MRZ-2a or MRZ-2b categories.
- **MRZ-4:** Areas containing no known mineral occurrence.

Petroleum Resources

As mentioned above, Kern County produces more oil than any other county in the United States. The valley floor area of Kern County and the surrounding lower elevations of the mountain ranges contain numerous deposits of oil and gas resources, a major economic resource for the County. Mineral and petroleum resources are basic to Kern County's economy. As new recovery technologies come into use, petroleum extraction should continue in economic importance. The project site is located directly south of the Paloma Oil/Gas Field and north of the Yowlumne Oil/Gas Field, which both include many active, idle, and plugged oil and gas wells. The closest active oil and gas well is number 351-O-15H located 2.35 miles northwest of the boundary of the project site (see **Figure 4.12-1, Oil and Gas Wells in the Project Vicinity**). The project is not located within any known oil production field, nor does the site contain any oil & gas wells (CalGEM, 2021).

Sand and Gravel

As discussed in the Land Use, Open Space, and Conservation Element of the Kern County General Plan, construction aggregates are a major economic mineral resource for Kern County. Sand and gravel have been determined to be important resources for construction, development, and physical maintenance, from highways and bridges to swimming pools and playgrounds. The availability of sand and gravel affects construction costs, tax rates, and affordability of housing and commodities. The State of California has statutorily required the protection of sand and gravel operations. Because transportation costs are a significant portion of the cost of sand and gravel, the long-term availability of local sources of this resource is an important factor in maintaining the economic attractiveness of a community to residents, business, and industry. The major resources of sand and gravel in Kern County are in stream deposits along the eastern side of the San Joaquin Valley and in the Sierra Nevada foothills, approximately 120 miles northeast of the project site, and in alluvial fan deposits along the Tehachapi Mountains at the southern end of the County, approximately 35 miles southeast of the project site. Most of the recent alluvium in the San Joaquin Valley floor is composed of sand used as a source of road base material.



SOURCE: CalGEM, Esri, 2021

Oil and Gas Wells in the Project Vicinity

Figure 4.12-1

Borax

As discussed in the Land Use, Open Space, and Conservation Element of the Kern County General Plan, borax constitutes a major economic mineral resource for Kern County. Borax, a borate mineral (a compound that contains Boron and oxygen), was discovered and put into production in 1872 in Nevada and later, in 1881, in Death Valley. The discovery of borates in southeastern Kern County in the Kramer District was accidental, when a water well penetrated lakebeds containing colemanite (calcium borate) in 1913. In 1927 underground mining of the minerals kernite and borax began and continued until 1957, when underground operations ceased and open-pit mining began, eventually becoming the largest open-pit mine in California. Annually, over 3.3 million tons are removed from this mine, which supplies about 50 percent of the world's supply of borates.

Limestone

Carbonate rocks were initially quarried in 1888 as a source of lime. By 1909, the limestone resources were used for the manufacture of Portland cement during the construction of the first Los Angeles aqueduct. Limestone has been mined continuously since 1921, just northeast of Tehachapi. The Tehachapi Plant was joined by California Portland Cement Company's Mojave Plant in 1955 and National Cement Company's Lebec Plant in 1976, making Portland cement production second only to borates in terms of economic importance to the region.

Dimensional Stone

Dimension stone is natural rock materials quarried for the purpose of obtaining blocks or slabs that meet specification as to size (width, length, and thickness) and shape. Color, grain, texture, pattern, surface finish, durability, strength, and polish ability are important selection criteria in determining dimension of the stone. Deposits of marble, sandstone, schist, and other rocks in Kern County have been sources of modest tonnages of building stone that have been utilized as dimension stone, field stone, rubble, and flagstone. Most of the dimension stone (marble and flagstone) was mined until 1904; field stone and flagstone have been mined mostly since about 1952 in the area around Randsburg.

Precious Minerals

In terms of total dollar value and number of deposits, gold is the most important metallic mineral commodity that has been mined in Kern County. The earliest mining in Kern County was in 1851 at placer gold deposits in Greenhorn Gulch, which drains into the Kern River about midway between Democrat Springs and Miracle Hot Springs. The first lode mining was in 1852, and by 1865 gold was being mined in four districts around the Kern River. Gold was first prospected in eastern Kern in the 1860s, with the two largest mines being established in the 1890s. The Yellow Aster and Golden Queen mines located in eastern Kern have yielded almost half of the total gold output of the county. The principal sources of silver in Kern County have been deposits in eastern Kern County. Although gold is the chief mineral in value, silver is predominant by a 5:1 ratio and is an important by-product of the gold ore.

Local Setting

The project site is located at an existing composting facility at 2653 Santiago Road. The site is in the southwest portion of Kern County, in a relatively flat area surrounded by undeveloped, agricultural uses, and solar power generating facilities. The project site is designated as a mineral resource zone, MRZ-3, for Portland Cement Concrete-Grade Aggregate by the California Geological Study in an Updated Mineral Land Classification map within the Bakersfield Production-Consumption Region (Kern County, 2009). Portions of the project site are designated by the South Kern Industrial Center Specific as 8.4 (Mineral and Petroleum). The project site falls outside of any oil or gas fields, the closest ones being Paloma, approximately 2.75 miles to the north, Yowlumne, approximately 2.6 miles to the south, and Buena Vista, approximately 6 miles to the west (CalGEM, 2021). The sounding area does have a number of idle or permitted oil and gas wells, but no active oil/gas or geothermal wells are located within the project's boundaries. The closest active oil well, number 351-O-15H, is 2.35 miles to the northwest (CalGEM, 2021). The nearest active mines are Golden Cat Corporation plant or mill, approximately 13 miles southwest, and San Emidio an open pit mine for sand and gravel, approximately 7.3 miles southeast (CDOC, 2021) see **Figure 4.12-2, Mines Within the Project Vicinity**.

4.12.3 Regulatory Setting

Federal

There are no applicable federal regulations for this issue area.

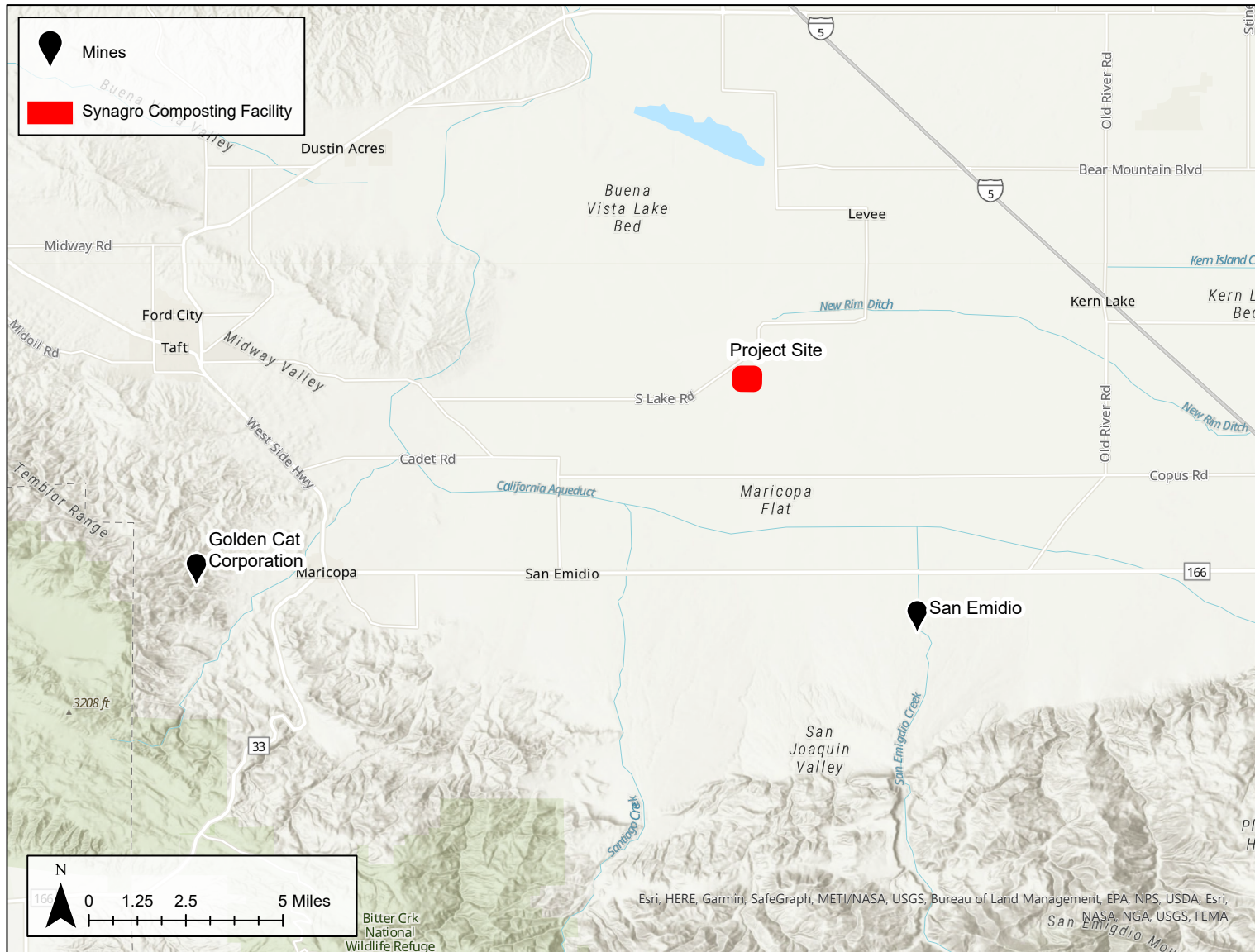
State

California Geologic Energy Management Division

The CalGEM (formerly known as the DOGGR) is a State agency responsible for supervising the drilling, operation, maintenance, plugging, and abandonment of oil, gas, and geothermal wells. CalGEM's regulatory program promotes the wise development of oil, natural gas, and geothermal resources in California through sound engineering practices, prevention of pollution, and implementation of public safety programs. To implement this regulatory program, CalGEM requires avoidance of building over or near plugged or abandoned oil and gas wells or requires the remediation of wells to current CalGEM standards (CDOC, 2020).

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act of 1975 requires the State Geologist to classify land into Mineral Resources Zones (MRZs) according to its known or inferred mineral potential. The primary products are mineral land classification maps and reports. Local agencies are required to use the classification information when developing land-use plans and when making land-use decisions (CDOC, 2020). MRZs are defined in detail in *Regional Setting*, above.



SOURCE: CDOC, Esri, 2021

Mines Within the Project Vicinity

Figure 4.12-2

Local

Kern County General Plan

The policies, goals, and implementation measures in the Kern County General Plan for mineral resources applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development such as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

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

1.9 -Resources

Goals

- **Goal 1:** To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations that will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources or diminish the other amenities that exist in the County.
- **Goal 2:** To protect areas of important mineral, petroleum, and agricultural resource potential for future use.
- **Goal 3:** To ensure that the development of resource areas minimizes effects of neighboring resource lands.
- **Goal 6:** Encourage alternative sources of energy, such as solar and wind energy, while protecting the environment.

Policies

- **Policy 14:** Emphasize conservation and development of identified mineral deposits.
- **Policy 17:** Lands classified as MRZ-2, as designated by the State of California, should be protected from encroachment of incompatible land uses.

Implementation Measure

- **Measure H:** Use the California Geological Survey's latest maps to locate mineral deposits until the regional and statewide importance mineral deposits map has been completed, as required by the Surface Mining and Reclamation Act.

Southern Kern Industrial Center Specific Plan (SKICSP)

The project site is located within the SKICSP, which was most recently amended June 22, 2021 (SPA 159 Map 500). The purpose of the SKICSP is to be used as a tool to closely define the planning criteria, determine the nature and extent of growth, to ensure orderly development, and address unique concerns to the area. The SKICSP is internally consistent with the Kern County General Plan and incorporates the County-wide General Plan goals and policies by addressing the mandatory General

Plan elements. Accordingly, the land use designation within SKICSP mirror those of the existing. There are no specific mineral resource related goals, policies, or implementation measures contained in the SKICSP that are applicable to the project. However, the SKICSP does refer to the 1992 FEIR, along with the Kern County General Plan above when addressing mineral resources. The 1992 FEIR identified the mitigations measures that ensure the potential for future hydrocarbon exploration to be maintained (SKICSP, 2002).

4.12.4 Impacts and Mitigation Measures

Methodology

The project's potential impacts to mineral resources have been evaluated using a variety of sources, including a review of information from the California Department of Conservation CGS, United States Geological Survey (USGS) and Kern County publications and maps. Using the mentioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in CEQA Guidelines Appendix G, to determine if a project could potentially have a significant adverse effect on mineral resources.

A project would have a significant adverse effect on mineral resources if it would:

- 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; or
- 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.

Project Impacts

Impact 4.12-1: The project would result in the loss of availability of a known mineral resource that would be of value to the region and residents of the State.

The project site is located on lands classified as MRZ-3 for cement concrete-grade aggregate. This classification by the California Geological Survey identifies the area as containing mineral deposits the significance of which cannot be evaluated from available data (Kern County, 2009). As the significance cannot be evaluated within this mineral zone, the project would not result in any significant loss of the availability of a known mineral resource. However, there are mineral rights to portions of the project site that could become exercised if any recoverable minerals are discovered in the future. As a result, the project would not interfere with nearby mineral extraction operations and would not result in the loss of land designated for mineral resources. Also, based on the absence of historical surface mining or petroleum on or within 10 miles of the project site, the potential for surface mining at the site is considered extremely low. As such, the project would not result in the

loss of availability of a known mineral resource and the potential impact to future mineral resources is less than significant. The nearest active mine, San Emidio is approximately 7.3 miles southeast and is far enough away that the project would not prevent continued operation of the plant. The project site is not located in an oil field and the nearest oil extraction facility is an oil and gas well, number 351-O-15H, located approximately 2.35 miles northwest (CalGEM, 2021). Given these characteristics, the project would not interfere with current oil and mineral extraction operations and would not result in the loss of land designated for mineral resources. Therefore, the project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state, and the potential impact to future mineral resources is less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Impact 4.12-2: The project would 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.

The project site is not located on a locally important mineral resource recovery site delineated by the Kern County General Plan. The South Kern Industrial Center (SKIC) Specific Plan outlines small patches of designation 8.4 (Mineral and Petroleum) within the Specific Plan, however to the north, northwest, and southwest of the composting facilities boundaries (SKICSP, 2002). The existing composting facility boundaries itself are designated as 3.4/2.5 (Solid Waste Facilities/ Flood Hazard) within the Specific Plan. The projects implementation would not cause any result in the loss of the 8.4 designated patches, and if desired after the use of the facility it can be returned to undeveloped land and potentially be accessed for onsite mineral resource development. The proposed modification to the CUP does not involve any new permanent structures, therefore avoiding the possibility of a new interference to the availability of a mineral resource. Therefore, loss of availability to mineral resource impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

As described in **Chapter 3, Project Description**, there are no cumulative projects within a reasonably close radius of the project site as shown in **Table 3-4, Cumulative Projects List**. The geographic scope

of impacts associated with mineral resources generally encompasses the project site and a 0.25-mile-radius area around the project site. This scope is appropriate because of the localized nature of mineral resource impacts. There are no other projects within this proximity. As the boundaries of the existing composting facility are established, development of this project would not interfere or prevent any other current or future mineral extraction. The 8.4 Mineral and Petroleum patches identified in the Specific Plan are not overlapping with the existing facilities borders and will not result in further significant impacts for this project. Therefore, the proposed project, combined with other related projects, would not result in the loss of availability of a known regional or statewide valuable mineral or petroleum resource. The project's incremental effect is not cumulatively considerable when viewed in combination with the effects of other closely related past, present, and reasonably conceivable future projects and thus would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Cumulative impacts would be less than significant.

Section 4.13

Noise

4.13.1 Introduction

This section of the Environmental Impact Report (EIR) addresses the potential noise impacts associated with construction and operation of the project. It describes the existing noise conditions on the project site, regulatory setting, the potential impacts from current and future ambient noise levels upon the proposed land uses, noise generation potential from proposed land uses and activities resulting from implementing the project, and feasible mitigation measures to reduce impacts.

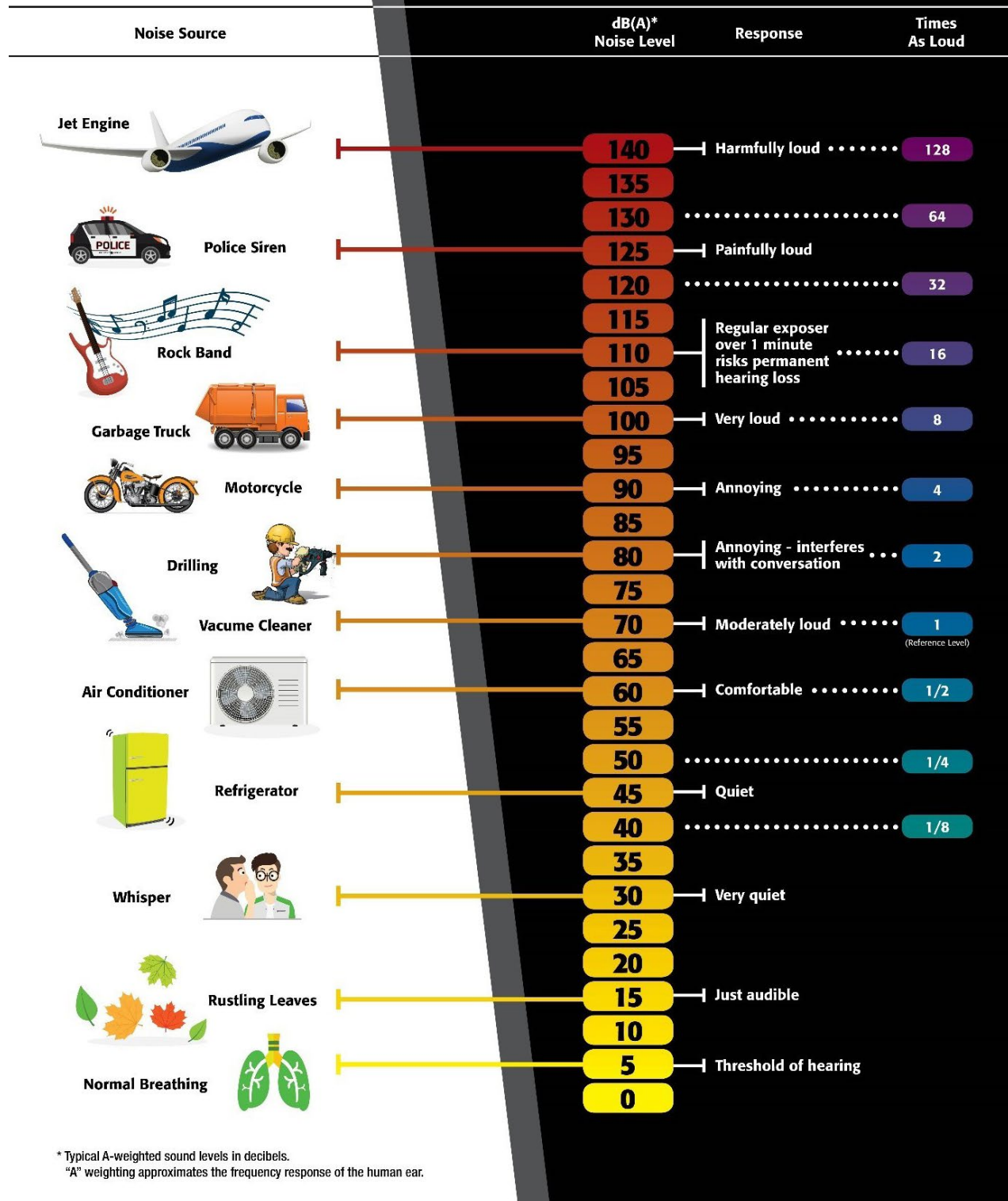
Acoustical Terminology

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. Noise is typically described as any unwanted or objectionable sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against sound frequencies in a manner approximating the sensitivity of the human ear. The A-weighted sound level of traffic and other long-term noise-producing activities within and around a community varies considerably with time. Measurements of this varying noise level are accomplished by recording values of the A-weighted level during representative periods during the day.

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range similar to how the Richter scale measures earthquake magnitudes. In terms of human response to noise, a sound 10 dBA higher than another is perceived to be twice as loud; 20 dBA higher, four times as loud; and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Examples of various sound levels in different environments are shown in **Figure 4.13-1**, *Sound Levels and Human Response*.

In most situations, a three-dBA change in sound pressure level is considered a “just-detectable” difference. A five-dBA change (either louder or quieter) is readily noticeable and a 10-dBA change is a doubling (if louder) or a halving (if quieter) of the subjective loudness. Sound from a small localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates or drops-off at a rate of six dBA for each doubling of the distance (six dBA/DD). This decrease, due to the geometric spreading of the energy over an ever-increasing area, is referred to as the inverse square law. However, highway traffic noise is not a single, stationary point source of sound. The movement of the vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. Since the change in surface area of a cylinder only increases by two times for each doubling of the radius instead of the four times associated with spheres, the change in sound level is three dBA per doubling of distance.

Common Environmental Noise Levels



SOURCE: Kimley-Horn, 2021

Numerous methods have been developed to measure sound over a period of time. These methods include (1) the community noise equivalent level (CNEL); (2) the equivalent sound level (L_{eq}); and (3) the day/night average sound level (L_{dn}). These methods and additional noise related terminology is described below.

Community Noise Equivalent Level (CNEL)

Cumulative noise metrics were developed to assess community response to noise. They are useful because they attempt to take into account the loudness and duration of the noise, the total number of noise events and the time of day these events occur in one single-number rating scale. They are designed to account for the known health effects of noise on people. CNEL is a 24-hour, time-weighted energy-average noise level based on dBA that measures the overall noise during an entire day. Noise that occurs during certain sensitive time periods is penalized for occurring at these times by adding decibels to its L_{eq} measurement. On the CNEL scale, noise between 7:00 a.m. and 10:00 p.m. is penalized by approximately five dB, to account for the greater potential for noise to interfere during these hours, as well as typically lower ambient (background) noise levels during these hours. Noise during the night (from 10:00 p.m. to 7:00 a.m.) is penalized by ten dB to attempt to account for our higher sensitivity to noise in the nighttime and the expected further decrease in ambient noise levels that typically occur in the night.

Equivalent Sound Level (L_{eq})

The equivalent sound level, abbreviated L_{eq} , is a measure of the exposure resulting from the accumulation of A-weighted sound levels over a particular time period (e.g., one-hour, eight-hour school day, nighttime or a full 24-hour day). However, because the length of the period can be different depending on the time frame of interest, the applicable period should always be identified or clearly understood when discussing the metric. Such durations are often identified through a subscript, for example $L_{eq(24)}$.

Conceptually, L_{eq} may be thought of as a constant sound level over the period of interest that contains as much sound energy as the actual time-varying sound level with its normal peaks and valleys. It is important to recognize, however, that the two signals (the constant one and the time-varying one) would sound very different from each other if compared in real life. Variations in the “average” sound level suggested by L_{eq} are not an arithmetic value, but a logarithmic (“energy-averaged”) sound level. Thus, loud events clearly dominate any noise environment described by the metric.

Day/Night Average Sound Level (L_{dn})

The day/night average sound level (L_{dn}) is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. L_{dn} is based on a measure of the average noise level over a given time period. The L_{dn} is calculated by averaging the L_{eq} for each hour of the day at a given location after penalizing the sleeping hours (from 10:00 p.m. to 7:00 a.m.) by 10 dBA to take into account the increased sensitivity of people to noises that occur at night. The sound level exceeded over a specified timeframe can be expressed as L_n (i.e., L_{90} , L_{50} , L_{10} , etc.). L_{50} equals the level exceeded 50 percent of the time; L_{10} , ten percent of the time; etc.

Maximum Sound Level (Lmax)

The maximum sound level recorded during a noise event.

Noise (Exposure) Contours

Noise (exposure) contours illustrate (typically a line drawn on a diagram/map) a noise source indicating constant levels of noise exposure. CNEL contours are frequently utilized to describe a community's exposure to noise.

Sound Propagation and Attenuation

For purposes of sound propagation, noise sources may be classified as point sources or line sources. Point sources usually are localized, such as a piece of machinery, and at a distance, sound from such sources will propagate in a spherical pattern. Sound levels from point sources will attenuate or drop-off at the rate of six dB for each doubling of distance. Sound from line sources, such as a highway, propagates in a cylindrical pattern. Sound from line sources will attenuate at a rate of three dB per doubling of distance.

Additionally, sound levels also may be attenuated by air and ground absorption, and from shielding by natural or man-made obstacles in the sound path. Noise barriers (walls or earth berms) are features that are commonly constructed to interrupt noise propagation and reduce noise levels. Wind and atmospheric temperature inversions also influence sound propagation.

Vibration Characteristics

Vibration is a unique form of noise. It is unique because its energy is carried through structures and the earth, whereas, noise is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise; e.g., the rattling of windows from truck pass-bys. This phenomenon is related to the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, ground-borne vibration generated by man-made activities attenuates rapidly as distance from the source of the vibration increases. Vibration, which spreads through the ground rapidly, diminishes in amplitude with distance from the source. The ground motion caused by vibration is measured as particle velocity in inches per second and, in the U.S. is referenced as vibration decibels (VdB).

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Sources within buildings such as operation of mechanical equipment, movement of people or the slamming of doors causes most perceptible indoor vibration. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel wheeled trains and traffic on rough roads. Ground type, distance between source and receptor, duration, and the number of perceived vibration events can all influence human and structural responses to vibration. The range of interest is from approximately 50 VdB, which is the typically background vibration velocity, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

Sensitive Receptors

Land uses deemed sensitive by the State of California include schools, hospitals, rest homes, and long-term care and mental care facilities, which are considered to be more sensitive to ambient noise levels than others. Many jurisdictions also consider residential uses particularly noise-sensitive because families and individuals expect to use time in the home for rest and relaxation, and noise can interfere with those activities. Some jurisdictions may also identify other noise-sensitive uses such as churches, libraries, and parks. Furthermore, sensitive noise receptors may also include threatened or endangered biological species, although many jurisdictions have not adopted noise standards for wildlife areas. Land uses that are generally not considered to be noise sensitive receptors include office, commercial, and retail developments. The nearest sensitive receptors to the project site are residential units on the northerly side of South Lake Road.

4.13.2 Environmental Setting

Noise-Sensitive Land Uses

Certain land uses are particularly sensitive to noise, including schools, hospitals, rest homes, long-term medical and mental care facilities, and parks and recreation areas. Residential areas are also considered noise sensitive, especially during the nighttime hours.

The proposed project is an existing composting facility located at 2653 Santiago Road. Land uses immediately surrounding the project site include solar installations to the west, south, and east. A petroleum oil refinery is located to the north across Santiago Road. The solar installation encompasses approximately 216 acres, and the petroleum oil refinery occupies approximately 80 acres. Northwest of the project site, along South Lake Road, is a railroad spur that ends approximately 1 mile southwest of the project area. The railroad extends northerly where it serves a second petroleum facility approximately one mile to the north.

There are no noise sensitive land uses in the immediate vicinity of the proposed project. The closest school to the project site is the Taft Primary School located approximately 12 miles to the west in the City of Taft. The State of California lists schools as sensitive receptors, which are considered to be more sensitive to effects from the environment than others. The nearest residence to the project site is approximately 1.5 miles to the north of the project. There also is a mobile home residence permitted for use by the caretaker/operator of a catfish farm approximately 1.5 miles northeast of the project site. The unincorporated communities of Taft Heights and Ford City which are adjacent to the south and north of the City of Taft also are approximately 12 miles to the west. The unincorporated communities of Dustin Acres and Valley Acres are located approximately 10 miles northwest of the project site along State Route (SR-119). No sensitive receptors, such as private residences, schools, parks, churches, or hospitals, exist within a 1-mile radius of the project site.

Existing Noise Environment

The proposed project is sited on approximately 100 acres within a 155-acre industrial parcel. Existing noise sources located in the immediate vicinity include natural noise sources such as wind and bird vocalizations, as well as manmade noise sources including the existing composting operation and vehicle traffic from local roadways. The existing ambient noise environment in the

immediate project vicinity is defined primarily by local traffic, the railroad spur along South Lake Road, and nearby agricultural and oil refining/industrial operations. The project site is located south of Santiago Road, which is connected to I-5 approximately 7 miles to the west via South Lake Road and Millux Road.

Existing Traffic Noise

Existing traffic noise is generated by trucks carrying feedstock and finished product arriving and departing the existing compost facility throughout the day. Depending on the type of material being hauled, the trucks can typically carry 20 to 25 tons of feedstock or compost. The number of loaded trucks arriving and departing the facility per day varies widely from 2 to 95. The Traffic Study prepared by Ruetters and Schuler Civil Engineers, March 2019 identifies that the approved 2002 CUP allows for up to 354 trips per day. The facility currently generates up to approximately 190 truck trips per day. At the CUP tonnage limit capacity, the proposed project is anticipated to generate 261 truck trips per day, which is less than the total permitted.

Stationary Sources

The proposed project is located within an existing composting facility in a primarily agricultural and industrial area. Noise from industrial and agricultural operations and equipment occurs within the project vicinity. There are no other sources of stationary noise in the vicinity of the proposed project.

4.13.3 Regulatory Setting

Federal

Noise Control Act of 1972 (42 USC 4910)

This act establishes a national policy to promote an environment for all Americans to be free from noise that jeopardizes their health and welfare. To accomplish this, the act establishes a means for the coordination of federal research and activities in noise control, authorizes the establishment of federal noise emissions standards for products distributed in commerce, and provides information to the public with respect to the noise-emission and noise-reduction characteristics of such products.

USEPA Recommendations in “Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety” (NTIS 550\9-74-004, USEPA, Washington, D.C., March 1974)

In response to a federal mandate, the United States Environmental Protection Agency (USEPA) provided guidance in this document, commonly referenced as the “Levels Document,” that establishes an L_{dn} of 55 dBA as the requisite level, with an adequate margin of safety, for areas of outdoor uses, including residences and recreation areas. The Levels Document does not constitute USEPA regulations or standards but identifies safe levels of environmental noise exposure without

consideration of costs for achieving these levels or other potentially relevant considerations. The Levels Document is intended to “provide State and local governments as well as the federal government and the private sector with an informational point of departure for the purpose of decision-making.” USEPA is careful to stress that the recommendations contain a factor of safety and do not consider technical or economic feasibility issues and, therefore, should not be construed as standards or regulations.

Occupational Safety and Health Administration Occupational Noise Exposure; Hearing Conservation Amendment (Federal Register 48 [46], 9738–9785, 1983)

The standard stipulates that protection against the effects of noise exposure shall be provided for employees when sound levels exceed 90 dBA over an 8-hour exposure period. Protection shall consist of feasible administrative or engineering controls. If such controls fail to reduce sound levels to within acceptable levels, personal protective equipment shall be provided and used to reduce exposure of the employee. Additionally, a Hearing Conservation Program must be instituted by the employers whenever employee noise exposure equals or exceeds the action level of an 8-hour time-weighted average sound level of 85 dBA. The Hearing Conservation Program requirements consist of periodic area and personal noise monitoring, performance and evaluation of audiograms, provision of hearing protection, annual employee training, and record keeping.

State

The California Department of Health Services has studied the correlation of noise levels and their effects on various land uses and established guidelines for evaluating the compatibility of various land uses, for the noise elements of local general plans, as a function of community noise exposure. The guidelines are the basis for most noise element land use compatibility guidelines in California.

The State requires all municipalities to prepare and adopt a comprehensive long-range general plan. General plans must contain a noise element (California Government Code Section 65302(f) and Section 46050.1 of the Health Safety Code). The requirements for the noise element of the general plan include describing the noise environment quantitatively using a cumulative noise metric such as CNEL or DNL, establishing noise/land use compatibility criteria, and establishing programs for achieving and/or maintaining land use compatibility. Noise elements should address all major noise sources in the community, including mobile and stationary noise sources. In California, most cities and counties have also adopted noise ordinances which serve as enforcement mechanisms for controlling noise.

The State of California, Governor’s Office of Planning and Research (OPR) land use compatibility for community noise environment chart identifies the normally acceptable range for several different land uses, as shown in **Figure 4.13-2, *Land Use Compatibility for Community Noise Environments***. Persons in low-density residential settings are most sensitive to noise intrusion, with noise levels of 60 dBA CNEL and below are considered “acceptable.” For land uses such as schools, libraries, churches, hospitals, and parks, acceptable noise levels go up to 70 dBA CNEL.



SOURCE: Governor's Office of Planning and Research

Land Use Compatibility for Community Noise Environments

Figure 4.13-2

CEQA Guidelines (PRC Section 21000 et seq.) requires the identification of “significant” environmental impacts and their feasible mitigation. Section XI of Appendix G to the CEQA Guidelines (CCR Title 14, Appendix G) lists some indicators of potentially significant impacts, which are included below under the heading “Thresholds of Significance”.

Local

Kern County General Plan

The Noise Element of the Kern County General Plan is a mandatory element as required by California Government Code Section 65302(f). The state requires that local jurisdictions prepare statements of policy indicating their intentions regarding noise and noise sources, establish desired maximum noise levels according to land use categories, set standards for noise emission from transportation and fixed- point sources, and prepare implementation measures to control noise. Noise Elements are prepared in accordance with *Guidelines for the Preparation and Content of Noise Elements of the General Plan*, published by the California Office of Noise Control in 1976.

The major purpose of the County’s Noise Element is to establish reasonable standards for maximum desired noise levels in the County, and to develop an implementation program which could effectively mitigate potential noise problems. The implementation measures have been designed so that they will not subject residential or other sensitive noise land uses to exterior noise levels in excess of 65 dBA L_{dn} , and interior noise levels in excess of 45 dBA L_{dn} .

Applicable goals, policies, and implementation measures from the Noise Element of the County’s General Plan relevant to the proposed project are summarized below.

Chapter 3. Noise Element

Section 3.3 – Sensitive Noise Areas

Goals

- **Goal 1:** Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.
- **Goal 2:** Protect the economic base of Kern County by preventing the encroachment of incompatible land uses near known noise producing roadways, industries, railroads, airports, oil and gas extraction, and other sources.

Policies

- **Policy 1:** Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.
- **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 6:** Ensure that new development in the vicinity of airports will be compatible with existing and projected airport noise levels as set forth in the ALUCP.
- **Policy 7:** Employ the best available methods of noise control.

Implementation Measures

- **Implementation Measure A:** Utilize zoning regulations to assist in achieving noise-compatible land use patterns.
- **Implementation Measure C:** Review discretionary development plans, programs and proposals, including those initiated by both the public and private sectors, to ascertain and ensure their conformance to the policies outlined in this element.
- **Implementation Measure E:** Review discretionary development plans to ensure compatibility with adopted Airport Land Use Compatibility Plans.
- **Implementation Measure F:** Require proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise sensitive land uses to exterior noise levels in excess of 65 dB L_{dn} and interior noise levels in excess of 45 dB L_{dn}.
- **Implementation Measure G:** At the time of any discretionary approval, such as a request for a General Plan Amendment, zone change or subdivision, the developer may be required to submit an acoustical report indicating the means by which the developer proposes to comply with the noise standards. The acoustical report shall:
 - a) Be the responsibility of the applicant.
 - b) Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.
 - c) Be subject to the review and approval of the Kern County Planning Department and the Environmental Health Services Department. All recommendations therein shall be complied with prior to final approval of the project.
- **Implementation Measure I:** Noise analyses shall include recommended mitigation, if required, and shall:
 - a) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
 - b) Include estimated noise levels, in terms of CNEL, for existing and projected future (10–20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.
 - c) Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.

- d) Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.
- **Implementation Measure J:** Develop implementation procedures to ensure that requirements imposed pursuant to the findings of an acoustical analysis are conducted as part of the project permitting process.

Kern County Code of Ordinances

The Kern County Code of Ordinances, Chapter 8.36 (Noise Control), includes acceptable hours of construction, and limitations on construction related noise impacts on adjacent sensitive receptors.

Section 8.36.020 – Prohibited sounds

It is unlawful for any person to do, or cause to be done, any of the following acts within the unincorporated areas of the county:

- H. To create noise from construction, between the hours of nine (9:00) p.m. and six (6:00) a.m. on weekdays and nine (9:00) p.m. and eight (8:00) a.m. on weekends, which is audible to a person with average hearing faculties or capacity at a distance of one hundred fifty (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:
 - 1. The resource management director or a designated representative may for good cause exempt some construction work for a limited time.
 - 2. Emergency work is exempt from this section.

Southern Kern Industrial Center Specific Plan (SKICSP)

The proposed project is within the South Kern Industrial Center (SKIC). The SKIC consists of approximately 744 acres which are planned for in the SKIC Specific Plan (SKICSP). The SKICSP is located approximately 18 miles southwest of Bakersfield and approximately 7 miles east of Taft, in unincorporated Kern County. The composting Facility was approved by Kern County under Conditional Use Permit No. 2, Map 158 (“Existing CUP”) on October 22, 2002 (Resolution No. 2002-421), along with a Supplemental Environmental Impact Report which was certified on the same date (collectively “Existing Entitlements”). Subsequent to the approvals, the Facility underwent construction and began operations in 2006.

The SKICSP was designed to achieve three primary goals; implement the Kern County General Plan, establish of development standards, and guide the planned development of the SKIC. The SKICSP contains general goals related to orderly growth and development, coordinated development with the Kern County General Plan, ensuring that surrounding noise sensitive uses are not substantially affected by the industrial operations. The SKICSP includes policies related to noise generation and the effects of noise and tries to ensure that conformance with noise limitations such as defined in the Kern County Zoning Ordinance are maintained. In Kern County, specific plans, such as the SKICSP, are used to implement goals, objectives, and policies of the General Plan in a more detailed and refined manner unique to a smaller area of the County. Accordingly, the applicable goals and policies, within the SKICSP, are consistent with those contained in the

applicable policies, goals, and implementation measures of the Kern County General Plan. Applicable goals and implementation measure related to minimizing the effects of noise in SKICSP are shown below;

Goals

- **Goal 1:** To maintain Noise level standards required by the Noise Element of the Kern County General Plan for heavy Industrial/manufacturing land uses.
- **Goal 2:** To protect adjacent land uses from the potentially harmful effects of exposure to excessive noise.

Implementation Measures

- **Implementation Measure 3:** All projects shall conform to the noise level standards found in the Noise Element of the Kern County General Plan.
- **Implementation Measure 4:** All on-site equipment must meet California Occupational Safety and Health Administration (Cal OSHA) noise limits that are comparable to an eight hour average of 85 dbA at three feet.
- **Implementation Measure 5:** The Kern County Environmental Health Services Department shall be given the opportunity to review all proposed development projects within the SKIC Specific Plan area prior to approval, during the Site Plan Review process.

Groundborne Vibration

There are currently no federal, State, or local regulatory standards for groundborne vibration. However, the California Department of Transportation (Caltrans) has developed vibration criteria based on potential structural damage risks and human annoyance. Caltrans' threshold criteria pertaining to building damage and human annoyance, for continuous and transient events, are summarized in **Table 4.13-1, *Vibration Criteria for Structural Damage*** and **Table 4.13-2, *Vibration Criteria for Human Annoyance*** respectively below.

As indicated in **Table 4.13-1, *Vibration Criteria for Structural Damage*** the threshold at which there is a risk to normal structures from continuous or frequent vibration sources is 0.3 in/sec PPV for older residential structures and 0.5 in/sec PPV for newer building construction. A threshold of 0.5 in/sec PPV also represents the structural damage threshold applied to older structures for transient vibration sources.

Table 4.13-1: *Vibration Criteria For Structural Damage*

Structure and Condition	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
Newer residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Notes: Transient sources create a single isolated vibration event, such as blasting or ball drops. Traffic, train, and most construction vibrations are considered continuous.

in/sec PPV = inches per second peak particle velocity

Source: Caltrans, 2013.

With regard to human perception, vibration levels would begin to become distinctly perceptible at levels of 0.04 in/sec PPV for continuous or frequent vibration sources and 0.25 in/sec PPV for transient vibration sources, as shown in **Table 4.13-2, *Vibration Criteria for Human Annoyance***. Continuous vibration levels are considered annoying for people in buildings at levels of 0.2 in/sec PPV.

Table 4.13-2: *Vibration Criteria For Human Annoyance*

Human Response	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.1
Annoying to people in buildings	--	0.2
Severe	2.0	0.4

Notes: Transient sources create a single isolated vibration event, such as blasting or ball drops. Traffic, train, and most construction vibrations are considered continuous.

in/sec PPV = inches per second peak particle velocity

-- Not available.

Source: Caltrans, 2013.

4.13.4 Impacts and Mitigation Measures

Methodology

This section analyzes impacts on noise and vibration from the implementation of the project based on changes to the environmental setting as described above, identified noise and vibration conditions at the project site, and the current regulatory framework. Impacts were evaluated based on a review of available data and information, which is summarized above, and in consideration of changes that would occur as a result of project implementation, in comparison to existing conditions.

This analysis first established baseline conditions for the affected environment relevant to noise and vibration, as presented above in **Section 4.13.2, *Environmental Setting***. These baseline conditions were evaluated based on their potential to be affected by construction activities as well as operation (build out) activities for the project. The evaluation of project impacts is also based on professional judgment, analysis of Kern County's noise and vibration policies, and the significance

criteria drawn from Appendix G of the CEQA Guidelines, which the lead agency has determined to be appropriate criteria for this EIR.

A Noise Technical Report was not required for this project because: the nearest sensitive receptor is located approximately 1.5 miles north of the project; the project is substantially distanced from other sensitive uses such as schools or hospitals; the project site is surrounded by industrial including a solar installation and petroleum oil refinery in a largely agricultural and industrial area; and the project would be consistent with applicable goals, policies, and implementation measures from the Noise Element of the Kern County General Plan and SKICSP.

Short-Term Construction Noise

To assess potential project construction noise impacts generated during the operation of construction equipment on the project site, the County, in its Chapter 8.36 of the Municipal Code, includes acceptable hours of construction and limitations on construction-related noise impacts on adjacent sensitive receptors. As stated in **Section 4.13.3, Regulatory Setting**, noise producing construction activities are prohibited between the hours of 9:00 p.m. and 6:00 a.m. on weekdays and 9:00 p.m. and 8:00 a.m. on weekends, when they are audible to a person with average hearing ability at a distance of 150 feet from the construction site, or if the construction site is within 1,000 feet of an occupied residential dwelling. The County has not established any noise level limits for construction activity.

Long-term Operational Noise Impacts

To assess potential project operational noise impacts, noise levels generated during operation of the proposed project would be compared to noise standards identified by Kern County. Kern County's Noise Control Ordinance (KCC 8.36) does not identify specific noise limits related to operation of a facility. Section 19.80.030(S) of the Kern County Zoning Code indicates that non-mobile sources of noise within 500 feet of property developed and zoned for residential use (E, R-1, R-2, and R-3) shall not exceed 65 L_{dn}. The code also states that between the hours of 10 p.m. and 7 a.m., the source should not result in an increase of 5 dBA or more over ambient levels. There are no residences within 500 feet of the project site; the nearest residence to the site is 1.5 miles (7,920 feet) north of the project site. Therefore, this section of the Kern County Code does not apply to the proposed project.

Exposure to Groundborne Vibration

Kern County does not have regulations that define acceptable levels of vibration, however, the Federal Transit Administration (FTA) and Caltrans provide vibration criteria for project analysis. **Table 4.13-3, Construction Vibration Damage Criteria** lists the potential vibration building damage criteria associated with construction activities, as suggested in FTA's *Transit Noise and Vibration Impact Assessment*. **Table 4.13-4, Guideline Vibration Damage Potential Threshold Criteria** includes additional building definition and vibration building damage thresholds.

Table 4.13-3: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)	Approximate LV (VdB) ¹
Reinforced concrete, steel, or timber (no plaster)	0.50	102
Engineered concrete and masonry (no plaster)	0.30	98
Non-engineered timber and masonry	0.20	94
Buildings extremely susceptible to vibration damage	0.12	90

Notes: ¹ RMS vibration velocity in decibels (VdB) re 1 μ in/sec.

μ in/sec = inches per second

FTA = Federal Transit Administration

in/sec = inches per second

LV = velocity in decibels

Source: FTA, 2006.

Table 4.13-4: Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources ¹	Continuous/Frequent
Extremely fragile historic buildings, ruins, and ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Notes:¹ Transient sources create a single, isolated vibration event, such as blasting or drop balls.

² Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Caltrans = California Department of Transportation in/sec = inches per second

PPV = peak particle velocity

Source: Caltrans, 2013.

Substantial Increases in Ambient Noise Levels

To assess potential project increases in ambient noise levels, Kern County does not specify what would constitute a “substantial temporary increase,” but Section 19.80.030(S) of the Kern County Zoning Code does stipulate that non-mobile sources operating between 10 p.m. and 7 a.m. should not result in an increase of 5 dBA or more over ambient levels. This section of the code does not strictly apply to this project since construction-related noise sources are primarily mobile sources, and the construction activities are over 1.5 miles (7,920 feet) from the nearest residential use.

Kern County does not identify a “substantial permanent increase,” but Section 19.80.030(S) of the Kern County Zoning Code stipulates that non-mobile sources operating within 500 feet of property developed and zoned for residential use (E, R-1, R-2, and R-3) should not result in an increase of 5 dBA or more over ambient levels. Although this section of the code does not strictly apply to the proposed project since the project site is over 1.5 miles (7,920 feet) from the nearest residential use.

Thresholds of Significance

Kern County’s Environmental Checklist (updated in May 2019) identifies the following criteria, as established in State CEQA Guidelines Appendix G, to determine if a project could potentially have a significant adverse effect related to noise. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to noise if it would result in:

- a. Generation of a substantial temporary or permanent increase in the 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 ground-borne vibration or ground-borne noise levels;
- c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

The lead agency determined in the NOP/IS (see Appendix A) that the following environmental issues areas resulted in no impact and were scoped out of requiring further review in this Draft EIR. Please refer to Appendix A of this Draft EIR for a copy of the NOP/IS and additional information regarding the following impacts:

- d. For a project located within the Kern County Airport Land Use Compatibility Plan, would the project expose people residing or working in the project area to excessive noise levels.

There are no private, public, or public use airports located within a 2-mile radius of the project site, nor is the site located within an airport land use plan. The project site is not located within an area covered by the Kern County Airport Land Use Compatibility Plan (ALUCP), nor would the project result in the development of new residential housing. Therefore, the project would not expose people to excessive noise levels associated with private, public, or public use airports. Thus, Impact Criteria (e) and (f) are not considered further in this EIR.

Project Impacts and Mitigation Measures

Impact 4.13-1: The project would generate a substantial temporary or permanent increase in the 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.

The proposed project would include expanding composting operations to utilize the entire 100-acre permitted project site, creation of an extended berm around this area, importing and installing additional equipment (new processing, grinding and odor/vector control equipment) necessary to process feedstocks, and minor earthwork to create the surfaces for new composting areas and creation of access roads. The improvements are anticipated to take approximately 60-90 days to complete and the composting facility would become fully operational under the proposed CUP modifications once approvals have been obtained. The majority of physical changes to the existing composting facility would consist primarily of the clearing of the surficial layers of soils and creation of a more level and uniform site upon which to make the improvements and install the equipment. Because the site is already relatively flat and level, substantial grading would not be required. In addition, minimal excavation would be needed but some may be required to enable for creation of footing and pads for the new equipment such as the solar-powered blowers for aerating compost piles and stormwater drainage facilities.

Construction Activities

A portion of the project site is an operational composting facility and surrounded by other industrial-type land uses. The existing permitted operation utilizes heavy construction equipment such as rubber-tire loaders, scrapers, dump trucks and water trucks. Heavy truck traffic is a normal part of the permitted activities. There is no record of noise complaints from the surrounding landowners.

In addition to expanding the feedstocks that can be accepted and processed at the existing facility, new processing, grinding and odor/vector control equipment would be installed to enable acceptance of the new feedstocks proposed as part of the proposed CUP modification. The 100-acre project site is surrounded by industrial land uses, which prevents the encroachment of land uses that would be adversely affected by construction and operation noise. Land uses immediately surrounding the project site include solar installations to the west, south, and east. A petroleum oil refinery with three tanks and petroleum piping is located to the north across Santiago Road. The solar installation encompasses approximately 216 acres, and the petroleum oil refinery occupies approximately 80 acres. The nearest sensitive receptors are located approximately 1.5 miles north of the project site. Additional residences are located more than two miles to the southwest of the proposed project, and the highest concentration of sensitive receptors are located in the City of Taft and adjacent unincorporated communities of Ford City and South Taft approximately 12 miles to west.

Construction activities would generate temporary noise through the use of on- and off-road vehicles. Typical construction equipment that may be used include excavators, graders, scrapers, compactors, haul trucks, and dozers. The noise levels of primary concern are typically associated with the site preparation phase because of the on-site equipment associated with grading and excavation. Typical noise levels associated with construction equipment are described in **Table 4.13-5, Typical Construction Noise Equipment**, using data from the FTA's *Transit Noise and Vibration Impact Assessment* (FTA 2006). Depending on the operations conducted, individual equipment noise levels are expected to range from 80 to 88 dBA at 50 feet.

Table 4.13-5: Typical Construction Noise Equipment

Noise Source	Noise Level (dBA) at 50 feet from Source
Dozer or Tractor	85
Excavator	82
Compactor	82
Front-end Loader	85
Backhoe	80
Grader	85
Crane	83
Generator	81
Truck	88

Source: FTA 2006.

Outdoor sound levels decrease logarithmically as the distance from the source increases. This decrease is due to wave divergence, atmospheric absorption, and ground attenuation. Sound radiating from a source in a homogeneous and undisturbed manner travels in spherical waves. As the sound waves travel away from the source, the sound energy is dispersed over a greater area, decreasing the sound pressure of the wave. Spherical spreading of the sound wave from a point source reduces the noise level at a rate of 6 dB per doubling of distance.

Construction activities would be temporary and would only result in short-term noise impacts. As stated in Mitigation Measure **MM 4.13-1**, below, construction activities would be conducted in accordance with applicable local noise standards (i.e., construction activities will not take place before 6:00 a.m. or after 9:00 p.m. on weekdays and 8:00 a.m. or after 9:00 p.m. on weekends and would not exceed established thresholds for sensitive receptors. Nonetheless, implementation of Mitigation Measure **MM 4.13-1** would further reduce noise impacts from construction of the project.

Short-Term Construction Groundborne Vibration

Construction activities have the potential to result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increasing distance. **Table 4.13-6**, *Typical Construction Equipment Vibration Levels*, shows typical vibration levels for various construction equipment.

Table 4.13-6: *Typical Construction Equipment Vibration Levels*

Equipment	PPV at 25 feet (in/sec)	Approximate v (VdB) at 25 feet
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson drilling	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: Caltrans 2013.

Long-term Operational Noise

The composting process would take place on the entire 100-acre parcel. Continued operation of the composting facility would require equipment similar to what is already in use on at the facility. Noise generated by operation of the composting facility is anticipated to be consistent with noise generated by existing composting operations. Additionally, the project site's designation would not be modified by the proposed project and would continue to prevent the encroachment of land uses that would be adversely affected by construction and operation noise, as required by the Kern County General Plan and SKICSP. Due to the existing level of industrial noise generated by the operation of on- and off-road construction equipment and vehicles at the project site, and the distance from the nearest sensitive receptor, operation of the composting facility would not generate

a substantial permanent increase in the ambient noise levels in the vicinity of the project in excess of local noise standards and impacts would be less than significant.

Long-Term Operation Groundborne Vibration

Vibration sources associated with long-term operation of the composting system would be similar to the sources of ground-borne vibration and noise during construction—the use and movement of heavy equipment and hauling trucks.

Mitigation Measures

MM 4.13-1: The following measures are to be implemented to further reduce short-term noise levels associated with project construction activities:

- a. Construction equipment shall be fitted with noise-reduction features such as mufflers and engine shrouds that are no less effective than those originally installed by the manufacturer.
- b. Construction activities at the project site shall comply with the hourly restrictions for noise-generating construction activities, as specified in the County's Code of Ordinances, Chapter 8.36. Accordingly, construction activities shall be prohibited between the hours of 9 p.m. to 6 a.m. on weekdays, and between 9 p.m. to 8 a.m. on weekends. These hourly limitations shall not apply to activities where hourly limitations would result in increased safety risk to workers or the public, such as commissioning and maintenance activities that must occur after dark to ensure photovoltaic arrays are not energized, unanticipated emergencies requiring immediate attention, or security patrols.
- c. Haul trucks shall not be allowed to idle for periods greater than five minutes, except as needed to perform a specified function (e.g., concrete mixing).
- d. Onsite vehicle speeds shall be limited to 15 miles per hour, or less (except in cases of emergency).
- e. Back-up beepers for all construction equipment and vehicles shall be broadband sound alarms or adjusted to the lowest noise levels possible, provided that the Occupational Safety and Health Administration and California Division of Occupational Safety and Health's safety requirements are not violated. On vehicles where back-up beepers are not available, alternative safety measures such as escorts and spotters shall be employed.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.13-1**, temporary impacts associated with construction activities would be less than significant and Operational impacts would be less than significant.

Impact 4.13-2: The project would expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.

Construction of the proposed project would not involve heavy manufacturing, drilling, or other subterranean activities that would generate excessive groundborne vibration or groundborne noise levels when in operation. In addition, the project would not require construction of facilities, therefore construction activities that could generate excessive groundborne vibration, such as pile driving or blasting, are not included as a part of the project. Further, project operations would be approximately 1.5 miles from the nearest sensitive receivers. Groundborne vibration (and related groundborne noise) dissipate rapidly travelling over a distance and would be minimal to non-existent at a distance of 1.5 miles. The impact would be less than significant and mitigation is not required.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Impact 4.13-3: The project would create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

As discussed under Impact 4.13-1, ambient noise at the project site is dominated by noise from the use of heavy equipment and vehicles for ongoing composting operations. Long-term noise generated by ongoing composting operations would be consistent with noise generated by existing operations. The nearest noise-sensitive receptors are located approximately 1.5 miles from the project site. The proposed project would not result in a substantial permanent increase in ambient noise levels capable of exceeding local noise standards; therefore, impacts would be less than significant and mitigation is not required.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Table 3-5, *Cumulative Projects List* (refer to **Chapter 3, *Project Description***) described the related cumulative land use projects in the surrounding areas have been: (1) submitted for plan processing; (2) approved by the County of Kern and City of Bakersfield; and/or (3) engaged in active construction programs. The area influenced by cumulative land use effects related to adjacent parcels and the surrounding planned development areas is described would not be substantial. The surrounding areas are developed with solar sites and a natural gas and petroleum site to the north.

As noted above, implementation of the proposed project would generate short-term and long-term noise during construction and operation from the use and movement of heavy construction equipment and vehicles and the operation of new equipment. However, due to the ambient noise levels at the project site being dominated by noise generated by the use of heavy equipment and vehicles for existing composting operations, the approximate 1.5-mile distance between the project site and the nearest sensitive receptor, and the existing industrial land uses surrounding the site, the project's contribution to future noise levels would be minor and would not result in a cumulatively considerable contribution to cumulative noise levels or noise impacts. The noise levels associated with construction and operation of the proposed project would be consistent with the standards established by the Kern County General Plan, SKICSP, and the Kern County Noise Ordinance, and would be further reduced with the implementation of Mitigation Measure **MM 4.13-1**.

No proposed projects have been identified within proximity to the project site that would substantially increase cumulative noise levels. Therefore, the proposed project would not result in a significant impact on either a project-specific or cumulative basis.

Mitigation Measures

Even though the Project does not result in a significant impact, the project is required to Implement Mitigation Measure **MM 4.13-1**

Level of Significance after Mitigation

With the implementation of Mitigation Measure **MM 4.13-1**, impacts would remain less than significant.

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Section 4.14 Public Services

4.14.1 Introduction

This section of the Environmental Impact Report (EIR) describes the affected environment and regulatory setting pertaining to public services, which include fire and police protection, schools, parks, medical services, and other public facilities. This section also addresses the potential impacts on public services that would result from implementation of the proposed project, and the mitigation measures to reduce these potential impacts. Information for this section was taken from numerous sources, including websites, personal correspondence, and service agency plans.

4.14.2 Environmental Setting

As described in **Chapter 3, Project Description**, the project site is an existing composting facility located at 2653 Santiago Road approximately 12 miles east of the City of Taft. The project site is located approximately 12 mile east of the City of Taft and the unincorporated communities of Taft Heights and Ford City which are adjacent to the south and north of the City of Taft. The unincorporated communities of Dustin Acres and Valley Acres are located approximately 10 miles northwest of the project site along State Route (SR-119). The composting facility operates under existing Conditional Use Permit (CUP) No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421). The proposed modifications to the CUP would allow the Facility to receive and manage newly defined types of organic waste streams for composting, as authorized by state law and CalRecycle. To enable processing of the expanded feedstock as authorized by the regulations, the existing area used for composting operations may be expanded by approximately 56 acres as permitted by the existing CUP. This modification to the CUP; however, would not change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre Compost Facility permitted under the existing CUP. The proposed project would continue to be served by the Kern County Fire Department (KCFD) for fire protection and Kern County Sheriff's Office (KCSO) for law enforcement and public safety.

An inventory of fire and police facilities in the project area is provided in **Table 4.14-1, List of Public Service Facilities Serving the Project Area**. The table identifies the agency, facility name, facility address, and approximate distance from the project site.

Service	Agency	Facility	Address	Approximate Distance
Fire/Emergency	Kern County Fire Department (KCFD)	Fire Station #21	303 North 10 th Street, Taft,	12 miles
	KCFD	Fire Station #53	9443 Taft Highway, Bakersfield	12 miles
Law Enforcement	Kern County Sheriff's Office (KCSO)	Sheriff's Office Taft	315 North Lincoln Street, Taft	12 miles
	California Highway Patrol (CHP)	Central Division	29449 Stockdale Highway, Buttonwillow	16 miles
School	Lakeside Union Elementary School District	Lakeside Union Elementary School (K-8)	14535 Old River Road, Bakersfield, CA	9.5 miles
Hospital	Dignity Health - Mercy Hospitals	Mercy Hospital Downtown	2215 Truxtun Ave, Bakersfield	22 miles
Parks	City of Maricopa	Maricopa City Park	801 Stanislaus St, Maricopa,	10 miles
Library	City of Taft	--	27 Cougar Ct., Taft	12 miles
Post Office	U.S. Postal Service	--	427 North St, Taft	12 miles

Sources: Kern County Fire Department, 2020a.
Kern County Sheriff's Office, 2020.

Fire Protection Services

The KCFD provides primary fire protection services, fire prevention, emergency medical and rescue services to more than 515,000 people in unincorporated areas of Kern County including arson investigation, and hazardous materials coordination. The KCFD operates 46 full-time fire stations and one seasonal station and is divided into seven battalions with five commands to provide for operational management. Currently, the KCFD is staffed with 546 uniformed personnel and 79 non-uniformed (civilian) personnel for a total of 625 permanent KCFD personnel (KCFD, 2020b). The KCFD is equipped with 55 fire engines, four ladder trucks, 41 patrol vehicles, 25 command vehicles, five dozers, two helicopters, two hazardous material response teams, and other ancillary vehicles and equipment (KCFD, 2020b)

The project site is currently served by KCFD Fire Station No. 21, the Taft Substation, located at 303 North 10th Street, in Taft, approximately 12 miles west of the proposed project site. KCFD Fire Station No. 53, is located at 9443 Taft Highway, in Bakersfield and also is located approximately 12 miles away but to the east of the project site. Fire Station 22, located at 801 Stanislaus Street in Maricopa, is located approximately 11 miles to the southwest, but due to roadway configurations, is not anticipated to be the primary responses, but in the event of a major fire, these and other resources would be called on to respond, as necessary.

The California Department of Forestry and Fire Protection (CAL FIRE) provides mapping of most areas of the state under the direction of Public Resources Code (PRC) 4201-4204 and Government Code 51175-89. Mapping efforts include a classification of Fire Hazard Severity Zones (FHSZs) as well as showing areas within a Federal Responsibility Area (FRA), State Responsibility Area (SRA) or Local Responsibility Area (LRA). The responsibility areas define what agencies will have the primary role of jurisdiction for firefighting in certain areas. FHSZs are categorized by the level of risk or threat in a certain area from fire. Areas such as mountain zones with thick and dry vegetation will typically be more susceptible to wildfire than a desert region with sparse vegetation.

The proposed project is within an LRA and is unzoned by CAL FIRE in terms of fire hazard severity [CAL FIRE], 2007a, 2007b). The proposed project is not located in an area designated as an SRA. The project site is surrounded by areas that are routinely managed and disked to control vegetation. There are no surrounding areas that contain thick vegetation or areas that would be considered fire hazards. Therefore, the fire hazard is considered very low. Kern County also requires all projects to use and apply the National Fire Code set forth by the National Fire Protection Association, the California Fire Code, the California Building Code, and the Kern County Ordinance Code to regulate fire safety.

Law Enforcement Protection

Kern County Sheriff's Office

The Kern County Sheriff's Department is responsible for providing law enforcement services through the enforcement of local, State and Federal laws. The completion of this goal involves crime prevention, field patrol (ground and air), crime investigation, apprehension of offenders, regulation of noncriminal activity and the performance of a number of related and support services. Traffic and parking control functions are also provided, with some investigation of property damage, traffic accidents and complete investigations of all injury, fatal, intoxication and hit-and-run accidents.

The Kern County Sheriff's Department administers police services throughout the County, enforcing local, State and federal laws. The Kern County Sheriff's Department is responsible for crime prevention, field patrol (ground and air), crime investigation, the apprehension of offenders, regulation of noncriminal activity, and a number of related and support services. Traffic and parking control functions are also provided, along with some investigation of property damage reports and traffic accidents.

Response time is the time required to handle a call for service, which is measured from the time a call is received until the time a patrol car arrives at the scene. Response times are variable, particularly because the nearest responding patrol car may be located anywhere in the station's patrol area and may not respond from the nearest substation. The average response used by the Kern County Sheriff's Department is five minutes or less for an emergency or immediate response incident (e.g., a crime that is underway and/or a life-or-death situation) and eight to ten minutes for routine calls (e.g., a crime that has already occurred and/or an incident that is not life threatening). Response to an emergency at or near the proposed project site can vary depending on the demands of the substation at the time of the call. If demands are high, response time will be longer than estimated. The response time for a non-emergency call could range from 15 to 30 minutes or more, depending on staffing and other calls for service.

The Sheriff's Office administers law enforcement services throughout the County, including jail system management, bailiff and prisoner transportation services to the courts, search and rescue operations, coroner services, and civil processing (serving lawsuit papers). It has 1,202 sworn, non-sworn, and civilian employees. A total of 567 authorized deputy sheriffs are deployed in patrol units, substations, detective units, court services positions, and special investigations units. The Sheriff's Office also has 338 deputy positions in its detention facilities and a professional support staff of 297 assigned throughout the County (KCSO, 2020).

The Sheriff's Office headquarters is located at 1350 Norris Road in the City of Bakersfield. In addition, there are 15 substations including an off-highway vehicle enforcement team that provide patrol services to remote areas of Kern County, including the Valley. The closest substation to the proposed project is the Taft substation. Petroleum, agriculture, and recreation are the primary industries located in the Taft response area. Accordingly, the Taft substation's response area includes vast and isolated oilfield and agriculture areas, as well as remote business locations. The response area for the Taft Substation is one of the busier substations in the county and investigations into illegal drug activities, burglaries, and theft are among the common crimes. The majority of the Taft Substation's jurisdiction consists of oilfields and farming communities who experience rural industrial thefts. As a result, patrol deputies work closely with the sheriff's Rural Crime Investigation Unit in order to prevent and deter oilfield and agriculture related crimes. Taft Substation consists of 787 square miles and has authorized personnel including 1 Sergeant, 2 Senior Deputies, 11 Deputy Sheriffs, and 1 Sheriff Support Technician.

California Highway Patrol

As a major statewide law enforcement agency, the California Highway Patrol (CHP) is responsible for managing and regulating traffic for the safe, lawful, and efficient use of California highways. The agency also provides disaster and life-saving assistance.

The primary purpose of the CHP is to ensure highway safety and provide service to the public. When requested, it assists local governments during emergencies. The CHP patrols State highways and all County roadways, enforces traffic regulations, responds to traffic accidents, and provides service and assistance to disabled vehicles. The CHP has a mutual aid agreement with the KCSO.

The CHP provides traffic regulation enforcement; oversees response to emergency incidents on California highways, or assists other public agencies responding to emergency incidents; and promotes the safe and efficient movement of people and goods on California highways to minimize loss of life, injuries, and property damage. CHP officers patrol 186,805 miles of roadway and implement the CHP's other law enforcement activities (e.g., vehicle theft investigation and prevention, vehicle inspections, accident investigations, and public awareness campaigns), with the support of the non-uniformed personnel assigned to area and division offices (CHP 2020a).

The CHP is divided into eight divisions that provide services in areas of California. The project site is within the jurisdiction of the Central Division. The Central Division has 15 offices, two commercial vehicle enforcement facilities, and three communications and dispatch centers. The nearest Central Division office to the project site is located near the community of Buttonwillow at 29449 Stockdale Highway, approximately 16 miles north of the project site (CHP 2020b).

Medical Services/Parks/Schools/Other Public Facilities

Emergency Medical Services

The Kern County Emergency Medical Services Division (EMS) is the lead agency for the emergency medical services system in Kern County and is responsible for coordinating all system participants in the County. The EMS includes a system of services organized to provide rapid response to serious medical emergencies, including immediate medical care and patient transport to definitive care in an appropriate hospital setting. An effective EMS System involves a variety of agencies and organizations working together to accomplish the goal of providing rapid emergency medical response and treatment. While most EMS responses are day to day emergencies, EMS agencies also plan and prepare for disaster medical response and are involved with preventative health care and managed care in the overall scope of their functions. Participants of the Kern County EMS include the public, fire departments, ambulance companies, other emergency service providers, hospitals, and Emergency Medical Technician (EMT) training programs throughout the County. The department also provides certification and re-certification for EMT's, paramedics, specialized nurses (MICN), and specialized dispatchers (EMD) (Kern County EMS, 2020).

The closest hospital to the project site is Mercy Hospital Downtown, in the City of Bakersfield, approximately 22 miles northeast. The next closest medical facility is West Side Family Health, approximately 11 miles west of the project site.

Parks and Recreation

The Kern County Parks and Recreation Department maintains neighborhood and community parks throughout the County, as well as several regional recreation areas. These facilities include scenic and view areas, playgrounds, competitive sports fields, multi-use trails, picnic grounds, campgrounds, water sports, and winter snow sports. In addition, the Kern County Parks and Recreation Department currently operates and maintains 40 neighborhood and community parks in the County. The total area of County neighborhood and community parks is more than 400 acres.

In addition to the neighborhood and community parks, the Kern County Parks and Recreation Department operates several public buildings available for senior, veteran, and recreational purposes. There are several Parks and Recreation Districts that provide facilities for the residents of some communities to supplement Kern County facilities or provide services that are not otherwise offered.

Several incorporated Cities manage park and recreation facilities. The State of California operates three parks in Kern County. The U.S. Forest Service maintains picnic grounds and overnight camping facilities in the Los Padres and Sequoia National Forests. The U.S. Army Corps of Engineers operates and maintains many of the facilities around Lake Isabella Reservoir. The U.S. Bureau of Land Management oversees a campground and other recreational areas, including the Pacific Crest Trail system, through the County.

As shown in **Table 4.14-1**, *List of Public Service Facilities Serving the Proposed Project Area*, the nearest park or recreational facility is the Maricopa City Park, which is approximately 10 miles southwest of the project site.

Educational Facilities

The educational system in Kern County for grades K (Kindergarten) through 12 are overseen by the Kern County Board of Education. This is a seven-person board that meets monthly to provide goals and policies to the Superintendent of Schools and the Districts of the County.

There are 36 elementary school districts, four unified school districts (providing elementary and high school facilities), four charter school districts, five high school districts, and three community college districts in Kern County (Kern County Planning and Community Development Department 2004). Additionally, California State University, Bakersfield, which is part of the California State University system, is in southwest Bakersfield. The project site is located within the Lakeside Union Elementary School District, and Lakeside Union Elementary is the nearest school to the project approximately 9.5 miles northeast of the project site (see **Table 4.14-1**, *List of Public Service Facilities Serving the Proposed Project Area*).

Library

The Kern County library system is a countywide system that provides all public library (non-school-based) services in Kern County. It was organized as the Kern County Free Library on July 11, 1911, and currently operates a main library and headquarters facility at Beale Memorial Library in Bakersfield, as well as 24 branches and three bookmobiles, which provide an additional 26 points of service. Branch libraries are generally established as a result of population growth, distance from other branches, and community expansion. The library system is governed by the Kern County Board of Supervisors and is financed by appropriations from County general funds, fines and fees, and State Public Library Fund revenues as provided by State law. (Kern County Planning and Community Development Department 2004.) As shown in **Table 4.14-1**, *List of Public Service Facilities Serving the Proposed Project Area*, the nearest library to the project site is located approximately 12 miles to the west in the City of Taft (Taft Library).

4.14.3 Regulatory Setting

Federal

There are no applicable federal regulations for this issue area.

State

California Fire Code

The 2016 California Fire Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operation. Chapter 6 (Building Services and Systems) of the Code focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. Building services and systems are addressed include emergency and standby power systems, electrical equipment, wiring and hazards, and stationary storage battery systems.

Chapter 33 (Fire Safety During Construction and Demolition) of the Code outlines general fire safety precautions to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment and promote prompt response to fire emergencies. Features regulated include fire protection systems, fire fighter access to the site and building, means of egress, hazardous materials storage and use and temporary heating equipment and other ignition sources.

California Department of Forestry and Fire Protection (CALFIRE)

Under Title 14 of the California Code of Regulations (CCR), CALFIRE has the primary responsibility for implementing wildfire planning and protection for State Responsibility Areas (SRAs). CALFIRE develops regulations and issues fire-safe clearances for land within a fire district of the SRA. More than 31 million acres of California's privately-owned wildlands are under CALFIRE's jurisdiction.

CALFIRE adopted Fire Hazard Severity Zone maps for State Responsibility Areas in November 2007. Fire Hazard is a way to measure the physical fire behavior so that people can predict the damage a fire is likely to cause. Fire hazard measurement includes the speed at which a wildfire moves, the amount of heat the fire produces, and most importantly, the burning fire brands that the fire sends ahead of the flaming front. The project site is not located within an area that would be classified as high or very high fire hazard. The project site is not located in the State Responsibility Area (SRA) (CALFIRE, 2007).

In addition to wildland fires, CALFIRE's planning efforts involve responding to other types of emergencies that may occur on a daily basis, including residential or commercial structure fires, automobile accidents, heart attacks, drowning victims, lost hikers, hazardous material spills on highways, train wrecks, floods, and earthquakes. Through contracts with local government, CALFIRE provides emergency services in 36 of California's 58 counties (CALFIRE, 2020).

Local

Kern County General Plan

The project site is located within the Kern County General Plan. Below are the applicable policies, goals, and implementation measures for public services found in the Kern County General Plan. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to the proposed project. Therefore, they are not listed below. However, as stated in Chapter 2, *Introduction*, of this EIR, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Chapter 1. Land Use Conservation and Open Space Element

1.4 Public Facilities and Services

Policies

- **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 6.** The County will ensure adequate fire protection to all Kern County Residents.
- **Policy 7.** The County will ensure adequate policy protection to all Kern County residents.

Implementation Measures

- **Implementation Measure A.** Continue to administer the Capital Improvement Program (CIP) and coordinate with public utility providers listing the necessary improvements to Kern County's public services and facilities in collaboration with key service providing agencies and the County Administrative Office as a first step toward the preparation of a long-term Public Services Plan for Kern County. This plan addresses the projected demand for public services throughout the County in comparison with projected revenues and identifies long-term financial trends for the major public service providers. The CIP and General Plan can assure compliance with the provisions of Government Code Sections 65401 and 65402 which require review of all capital facility decisions for consistency with this General Plan.
- **Implementation Measures B.** Determine local costs of County facility and infrastructure improvements and expansion which are necessitated by new development of any type and prepare a schedule of charges to be levied on the developer at the site of approval of the Final Map. This implementation can be effectuated by the formation of a County work group.
- **Implementation Measure J.** Ensure that the Superintendent of Schools and the respective school districts are informed of development proposals and are afforded the opportunity of evaluating their potential effect on the physical capacity of school facilities.
- **Implementation Measure L.** Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in the County shall not be approved unless adequate fire protection facilities and resources can be provided.

1.10 General Provisions

Goal

- **Goal 1.** Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving viable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

1.10.1 Public Services and Facilities

Policies

- **Policy 9.** New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure that it generates and upon which it is dependent.
- **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 extension or improvements that are required to ensure the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.

Chapter 4: Safety Element

4.1 – Introduction

Goals

- **Goal 1.** Minimize injuries and loss of life and reduce property damage.
- **Goal 2.** Reduce economic and social disruption resulting from earthquakes, fire, flooding, and other geologic hazards by assuring the continuity of vital emergency public services and functions.
- **Goal 5.** Ensure the availability and effective response of emergency services following a catastrophic event.
- **Goal 7.** Ensure that adequate emergency services and facilities are available to the residents of Kern County through the coordination of planning and development of emergency facilities and services.
- **Goal 8.** Reduce the public’s exposure to fire, explosion, blowout, and other hazards associated with the accidental release of crude oil, natural gas, and hydrogen sulfide gas.

4.6 Wildland and Urban Fire

Policies

- **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 4.** Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.
- **Policy 6.** All discretionary projects shall comply with the adopted fire code and the requirements of the fire department.

Implementation Measure

- **Measure A.** Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

Kern County Specific Plans

Kern County has adopted 39 Specific Plans, 10 Rural Community Plans, and 14 Interim Rural Community Plan Maps. The Specific Plans and Rural Community Plans are intended to be an

amplification of the goals and policies of the Kern County General Plan and are, therefore, consistent therewith.

South Kern Industrial Center Specific Plan

The proposed project is within the South Kern Industrial Center (SKIC). The SKIC consists of approximately 744 acres which are planned for in the SKIC Specific Plan (SKICSP). The SKICSP is located approximately 18 miles southwest of Bakersfield and approximately 10 miles east of Taft, in unincorporated Kern County.

The SKICSP notes that the provision of adequate public services including police and fire services are important elements to the functioning of the proposed project and operation of the entire plan area. As discussed above, the SKICSP recognizes that law enforcement services will be provided to the site by KCSO but notes the Taft Fire Department would provide service. Since the writing of this SKICSP, the KCFD would be responsible for provision of services. The SKICSP does note response time would be approximately 20 minutes. The SKICSP lists goals and policies related to the provision of public services. Those applicable to the proposed project are listed below:

Goals

- **Goal 3.** To provide for the coordinated planning and development of the Specific Plan Area police/security and fire services.

Policies

- **Policy 1.** Strengthen the existing procedures for planning and coordinating the required infrastructure utilities, facilities, and services for the site.

Implementation

- **Implementation Measure 3.** Development proposals shall comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrants.
- **Implementation Measure 8.** Police and fire protection methods shall be renewed and updated on an annual basis by the appropriate agencies, as needed, with recommendations made by those jurisdictional agencies to achieve a balance between fiscal constraints and adequate levels of service.
- **Implementation Measure 9.** New development shall be required to demonstrate the availability of adequate fire protection and suppression facilities, prior to issuance of a building permit. Fire flow requirements within the specific plan area shall be determined by the KCFD during the site plan review process. The developers of the plan area shall provide and install fire hydrants at a maximum of 330 feet apart along all plan area streets, or as deemed appropriate by the KCFD. No building shall be greater than 165 feet from a fire hydrant or water storage tank.

Kern County Fire Department Wildland Fire Management Plan

The KCFD Wildland Fire Management Plan documents the assessment of the wildland fire situation throughout the State Responsibility Area (SRA) within the County. The Plan includes stakeholder contributions and priorities and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire problem. The goal of the Plan is to reduce costs and losses from wildfire by protecting assets at risk through pre-fire management prescriptions and increases initial attack success. The plan systematically assesses the existing levels of wildland protection services and identifies high-risk and high-value areas, which are potential locations for costly and damaging wildfires. The plan also ranks the areas in terms of priority needs and prescribes what can be done to reduce future costs and losses (KCFD, 2009).

Kern County Fire Code

Chapter 17.32 of the Kern County Municipal Code details the Kern County Fire Code, which is an adoption of the 2016 California Fire Code and the 2015 International Fire Code with some amendments. The purpose of the Kern County Fire Code is to regulate the safeguarding of life, property, and public welfare to a reasonable degree from the hazards of fire, hazardous materials release and/or explosion due to handling of dangerous and hazardous materials, conditions hazardous to life or property in the occupancy and use of buildings and premises, the operation, installation, construction, and location of attendant equipment, the installation and maintenance of adequate means of egress, and providing for the issuance of permits and collection of permit fees.

Kern County Fire Department Unit Strategic Fire Plan

The KCFD Unit Strategic Fire Plan, adopted in March of 2018 is the most current document that assesses the wildland fire situation throughout the SRA within the County. Similar to other plans, this document includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire planning area. The plan provides for a comprehensive analysis of fire hazards, assets at risk, and level of services to systematically assess the existing levels of wildland protection services and identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires. Additionally, the plan provides an annual report of unit accomplishments, which, in 2017, included completion of a number of fuel reduction projects, hosted three wildfire safety expos in Battalions 1, 5, and 7, and the award of three SRA fuel reduction grants for a total of \$500,000. The plan gives an overview of KCFD Battalions and ranks these areas in terms of priority needs as well as identifies the areas of SRA. According to the plan, 69 percent of Kern County areas are within a SRA. The County is broken up into six different fuel management areas, Tehachapi, Western Kern, Northern Kern, Mt. Pinos Communities, Kern River Valley, and Valley. The project site is located within Battalion 2 (Western Kern) (KCFD 2020).

Kern County Office of Emergency Services Hazards Mitigation Plan

The purpose of the Kern County Office of Emergency Services (KCOES) Kern Multi-Jurisdictional Hazard Mitigation Plan is to reduce or eliminate long-term risk to people and property from natural hazards and their effects in Kern County. The plan includes specific recommendations for actions that can mitigate future disaster losses, as well as a review of the County's current capabilities to reduce hazards impacts. This multi-jurisdictional plan includes Kern County, and the incorporated

municipalities of Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. The plan also covers 53 special districts that include school, recreation and park, water, community service, and other districts. The plan has been formally adopted by each participating entity and is required to be updated a minimum of every 5 years (KCOES 2012) and is being updated but not yet finalized.

Capital Improvement Plan

A proposed countywide Capital Improvement Plan (CIP) was presented to the Kern County Board of Supervisors on October 9, 2007 and adopted in 2008. The CIP represents the best current understanding regarding new public facilities that will be needed to serve projected development in the County through 2030. The scope of services includes parks, libraries, Sheriff's Office (public protection and investigation), fire department, animal control, public health, landfill/transfer facilities, and general government. Roads and sewer costs, as well as related impacts are not part of the CIP. The program includes three phased components:

Phase One: Develop a conceptual CIP for the included facility categories, assessing what additional capacity and conceptual projects are required to provide needed infrastructure for new development through 2030;

Phase Two: Evaluate existing and potential funding sources, and outline options available as financing mechanisms, including a development fee proposal; and

Phase Three: Perform a fiscal (operational) analysis for use in evaluating the ongoing operating and maintenance impact of a new development on the County's general fund.

The adopted CIP includes a summary of proposed service levels for the included facilities and a conceptual list of the planned projects upon which the CIP was based.

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. Three dominant trends stand out.

- The passage of a string of tax limitation measures, starting with Proposition 13 in 1978 and continuing through the passage of Proposition 218 in 1996;
- Declining popular support for bond measures to finance infrastructure for the next generation of residents and businesses; and
- Steep reductions in federal and state assistance.

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. As described above, the County has adopted a Capital Improvement Program (CIP) in 2007 that identified the bases current understanding of the public facilities that will be needed to accommodate new development anticipated through 2030. The CIP further identifies appropriate existing facility demand standards

to be used as a basis for estimating future facility needs and level of service. The basic purpose of the CIP is to identify the facilities and infrastructure needed to serve the populations through 2030.

Continued growth in the County, as well as the impacts resulting from that growth, have increased the demands on countywide public services, making it difficult to implement and fund many of the facilities identified within the CIP while maintaining existing public service demand standards.

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

- Sheriff Patrol and Investigation Facilities; and
- Fire Facilities

4.14.4 Impacts and Mitigation Measures

Methodology

The methodology used to evaluate potential public service impacts includes the following: (1) evaluation of existing fire and law enforcement services and personnel for the fire and law enforcement stations serving the project site; (2) determination of whether the existing fire and police services and personnel are capable of servicing the proposed project, in addition to the existing population and building stock; and (3) determining whether the proposed project's contribution to the future service population would cause fire or police station(s) to operate beyond service capacity. The determination of the significance of the proposed project on fire protection and emergency medical and police protection services considers the level of services required by the proposed project and the ability of the KCFD and KCSO to provide this level of service and maintain the regular level of service provided throughout the county, which in turn could require the construction of new or expansion of existing facilities. The methodology for this analysis included a review of available KCFD and KCSO data, including KCFD Unit Strategic Fire Plan. Using the aforementioned resources and professional judgment, impacts were analyzed according to the CEQA significance criteria described below.

Thresholds of Significance

The Kern County California Environmental Quality Act (CEQA) Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the State CEQA Guidelines, to determine if a project could potentially have a significant adverse effect on public services.

The Kern County Environmental Checklist identifies that a project would normally be considered to have a significant impact related to public services if it would:

- a. Result in substantial adverse physical impacts associated with the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
 - i. Fire Protection;
 - ii. Police Protection;
 - iii. Schools;
 - iv. Parks; or,
 - v. Other Public Facilities.

The lead agency determined in the NOP/IS (Appendix A) that the following issue areas would result in no impacts or less-than-significant impact, schools, parks, or other public facilities.

The project is a modification to an existing CUP and does not involve changes leading to substantial increase in population that would result in substantial adverse physical impacts to public services and governmental facilities, such as the specifically noted (iii.) schools, (iv.) parks, or (v.) other public facilities. The project would not lead to an increase in population that would result in the need for additional housing and would not necessitate the construction of parks, schools, or other public facilities, or present a burden on existing parks, schools, or other public facilities. No further analysis is warranted.

Project Impacts and Mitigation Measures

Impact 4.14-1: The project would result in substantial adverse physical impacts associated with the provision of new or physically altered fire or police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire or police protection services.

Fire Protection Services

The existing composting facility operates 24 hours per day, 7 days per week with employees onsite 24 hours per day. Within a 24-hour time period there are currently 14 employees working at the facility, not including the truck drivers that travel to the facility to deliver materials. The number of employee numbers may vary seasonally or change due to business needs but is not anticipated to require a more than a maximum of 60 total employees. The proposed project already includes emergency access and other safety features and plans for fire protection.

As discussed in **Section 4.9, *Hazards and Hazardous Materials***, the transportation of hazardous materials within the State of California is subject to various federal, State, and local regulations. The California Highway Patrol (CHP) designates through routes to be used for the transportation of hazardous materials. Transportation of hazardous materials is restricted to these routes, except in cases where travel branching from these routes is required to deliver or receive hazardous materials. The Kern County General Plan shows the nearest hazardous materials shipping routes to the project

site as the following: State Highway (SH) 166 (approximately 5 miles south of the project site); SH-33 (approximately 11 miles west of the project site), and Interstate (I) 5 (approximately 7 miles northwest), of the project site).

The proposed modifications to the CUP would allow the Facility to receive and manage newly defined types of organic waste streams for composting, as required by CalRecycle. Per Mitigation Measure **MM 4.9-1**, the project proponent would be required to update the Facility's Hazardous Materials Business Plan to reflect changes to existing operations. To enable processing of the expanded feedstock as required by the regulations, the existing area used for composting operations may be expanded into the remaining, approximately 56-acre undeveloped portion of the existing CUP boundary. This modification to the CUP, however, would not change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre Compost Facility permitted under the existing CUP. Nonetheless, with the additional personnel, the proposed project has the potential to create an increased demand for emergency services from the KCFD. Service demands could increase if accidents occur during addition of the new equipment and during operations because additional employees are anticipated. Typical service demands per employee are less than service demands for uses such as residential uses, however, the addition of machinery and personnel could increase service demands. Due to the nature of the project, the increase in workers during installation of the equipment would be temporary and, upon completion, would cease. In addition, the potential for an increase of 46 additional employees, for a total of up to 60 employees would be a negligible increase in employees and is not anticipated to result in a substantial increase in demands for fire services. Regarding potential increased demand for fire services in adjacent areas, the project site is surrounded a solar farm, and by highly disturbed land that is routinely disked and contain little native vegetation. These areas are not at risk of wildfire and the project would not exacerbate any such risk.

The KCFD will review the proposed composting facility site plans and determine if the facility layout and design provide adequate emergency access and availability of fire water to support the extinguishment of a fire prior to approval of development permits. Implementation of Mitigation Measure **MM 4.14-1** would ensure payment of development impact fees by the project proponent to compensate for any increase in service demand by the proposed project.

Law Enforcement Services

As described above, the KCSO provides primary police protection services for the project site and surrounding areas. The Taft Substation, located approximately 11 miles west of the project site, would provide primary law enforcement services to the project site. Similar to fire protection services, the need for police protection services could increase during construction and operation of the proposed project as additional personnel would be present on the project site.

The project site, a composting facility, is in a relatively remote location off South Lake Road and surrounded by vacant land, agricultural land, a solar farm, and petroleum industry facilities. As such, the project site and surrounding areas unlikely to attract attention that would it or surroundings sites likely targets of or susceptible to crime. Therefore, a large increase for KCSO services is not expected. While construction activities would require the transportation and hauling of new machinery and equipment, resulting in temporarily increase traffic volumes along the I-5 corridor and local roads including South Lake Road, Hill Road, Millux Road, and Old River Road, during installation of new

equipment, these increases occurring along the haul routes, to include deliveries, and other project-related traffic would be temporary and, therefore, would not have a significant adverse effect on the KCSO protective service provision or CHP's ability to patrol the highways. Furthermore, project's construction personnel commuting to the project site via these highways would be required to adhere to all traffic laws. Therefore, the slight increase in traffic would not result in the need for new or altered facilities during construction.

Current project operations result in a total of approximately 130 daily trips including 98 truck trips, and 32 employee trips split between the 14 employees per the three daily shifts. The existing CUP anticipated a maximum total of 357 trips, including 261 truck trips and 96 employee trips split between the 32 employees per three daily shifts. The proposed CUP modification would not change the number of truck trips or volumes of materials the Facility can receive, it will only expand the types of material that can be received. It should be noted that, as with construction vehicles, project personnel commuting to the project site via these highways would be required to adhere to all traffic laws, and roadways would be patrolled by the same KCSO and CHP personnel out of the same stations. Therefore, any increase in traffic would be temporary and would not result in the need for new or altered facilities during operations.

In addition, the proposed project is not anticipated to result in a substantial increase demand for law enforcement personnel in response to crimes committed on-site. For security, the project is surrounded by a berm with a fenced and gated single point of entry that would prevent unauthorized access. The existing parking lot is within the area and provides secure parking for worker vehicles. These measures, as well as on-site security such as cameras and lockable structures, and the nature of the project site would ensure that the introduction of new composting processing equipment would be a substantial attractant to people to steal, burglarize, or be the subject of criminal activity. Therefore, new or physically altered KCSO or CHP facilities would not be required to accommodate the limited increase in needs from the project and impacts to police services are less than significant.

Mitigation Measures

Implement Mitigation Measure **MM 4.9-1** (see **Section 4.9**, *Hazards and Hazardous Materials*, for full mitigation measure text) and the following additional measure.

MM 4.14-1: Prior to the operation of expanded composting activities in the 100-acre project site under the CUP modification the project proponent shall coordinate with Kern County to determine the need for payment of land development services fees, in accordance with the Kern County Land Development Services Fee Schedule. While the proposed project would not increase the allowable tonnage at the site, and the trips are accounted for in the existing CUP, the applicant shall coordinate and submit evidence of payment to the Kern County Planning and Natural Resources Department prior to issuance of grading or building permits. Payment of fees will be provided for sheriff's patrol and investigative services, and fire services.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.9-1** and **MM 4.14-1**, impacts would be less than significant.

Cumulative Setting, Impacts and Mitigation Measures

The cumulative study area related to public services is based on the service area for each of the fire and police departments serving the project site. Similar to the proposed project, all of the related projects listed in **Chapter 3, Project Description**, in **Table 3-4, Cumulative Projects List**, of this EIR would be required to pay a development impact mitigation fee, if deemed appropriate by the Kern County Planning and Natural Resources Department or equivalent agency (in the case of fire protection). These projects would also be required to undergo environmental review, in compliance with the requirements of CEQA. Should potential impacts to public services be identified, appropriate mitigation would be prescribed that would reduce impacts to less-than-significant levels.

As discussed previously, the project proponent would be required to pay a development impact fee assigned pursuant to the existing CUP to mitigate any potential impacts to fire or police protection services resulting from the proposed project. With payment of the required mitigation fee as assessed by the Kern County Planning and Natural Resources Department, any additional fire or police protection services, facilities, or personnel required as a result of the proposed project would be appropriately funded. The proposed project would not create a cumulatively considerable impact related to police or fire protection services and would have a less-than-significant cumulative impact. Therefore, cumulative impacts would be less than significant with implementation of Mitigation Measures **MM 4.9-1** through **MM 4.9-3**, and **MM 4.14-1**.

Mitigation Measures

Implementation of Mitigation Measures **MM 4.9-1** through **MM 4.9-3** (see **Section 4.9, Hazards and Hazardous Materials**, for full mitigation measure text), and **MM 4.14-1** would be required.

Level of Significance after Mitigation

With the implementation of Mitigation Measures **MM 4.9-1** through **MM 4.9-3**, and **MM 4.14-1**, cumulative impacts would be less than significant.

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Section 4.15 Transportation and Traffic

4.15.1 Introduction

This section of the Environmental Impact Report (EIR) addresses potential impacts of the project on transportation and traffic and describes the environmental and regulatory settings. Information in this section is based primarily on the Traffic Study for South Kern Compost Manufacturing Facility South Kern Industrial Center (SKIC) Southwest of Bakersfield prepared by Ruettggers & Schuler in March 2019, and Addendum to the Traffic Study Prepared for South Kern Compost Manufacturing Facility at South Kern County Industrial Complex prepared by Ruettggers & Schuler in July 2020; see Appendix E, *Traffic Study*.

4.15.2 Environmental Setting

Regional Setting

Major Highways

Interstate 5 (I-5) would provide access to the general vicinity of the project during the construction and operation phases. I-5 is a major north–south interstate freeway that travels the length of California, connecting the metropolitan regions of Southern and Northern California. In the vicinity of the project site, I-5 is approximately 7 miles east of the project site and in this location is a four-lane freeway (two lanes in each direction). I-5 would be used to interconnect with roadways that would be used to access the project site. The following is a description of the roadways that would be used by project related vehicle trips.

Old River Road is a two-lane local roadway with painted centerline and generally trends north and south. Old River Road has approximately 24 feet of travelway (not including the unpaved roadway shoulders). Old River Road would be used as a link between I-5 and Millux Road (approximately 1.25 miles to the north). Old River Road connects the rural, agricultural, and generally undeveloped land to the south of I-5 north to the western portion of the urbanized City of Bakersfield.

Millux Road is a two-lane local roadway with painted centerline and trends east and west. Millux Road has approximately 24 feet of travelway (not including the unpaved roadway shoulders). Millux Road would be used for approximately 5 miles between Old River Road and Hill Road to the west. Millux Road is used to access the rural and predominantly agricultural area in the vicinity.

Hill Road is a two-lane local roadway with painted centerline and trends north to south. Hill Road has approximately 22 feet of travelway (not including the unpaved roadway shoulders). Hill Road would be used for approximately 2 miles between Millux Road and South Lake Road to the South. Hill Road is used to access the rural and predominantly agricultural in this immediate vicinity and terminates at Pieri Road approximately 1 miles to the north.

South Lake Road is a two-lane local roadway with painted centerline and trends from southwesterly and northeasterly. South Lake Road has approximately 24 feet of travelway (not

including the unpaved roadway shoulders). South Lake Road would be used for approximately 3.5 miles between Hill Road and Santiago Road to the southwest and which would be used for direct access to the project site. South Lake Road is used to access the rural and predominantly agricultural area in the vicinity as well as the existing railroad and petroleum facilities in the area.

Santiago Road is two and four lane roadway with a striped centerline but intermittent lane markings. Santiago Road is crossed by the existing rail line immediately east of its intersection with South Lake Road. Santiago Road would be used to access the driveway to the Project site on the southern side of Santiago Road.

According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System, there are no Designated State Scenic Highways within Kern County (see **Section 4.15.3, Regulatory Setting**, for more information on the State Scenic Highway Mapping System).

Alternative Transit Facilities

Non-Motorized Transportation

Bicycling is considered an effective alternative mode of transportation that can help to improve air quality, reduce the number of vehicles traveling along existing roads and highways, and reduce energy consumption. There are 67 miles of existing bicycle facilities in the unincorporated portions of Kern County. However, there are no dedicated pedestrian or bicycle facilities in the immediate project vicinity or along the surrounding roadways.

Public Transit

Public transportation in Kern County is provided by Kern Regional Transit. Kern County provides service between Bakersfield and rural communities, including Taft, but there is no public transit service to the project site or vicinity.

Project Setting

Study Area

As described in Chapter 3, Project Description, the project site is an existing composting facility at 2653 Santiago Road. The Project site is located in the South Kern Compost Manufacturing Facility within the South Kern Industrial Center (SKIC). Land uses within the 744-acre SKIC are defined by the South Kern Industrial Center Specific Plan (SKICSP). The Project site is located approximately 12 miles east of the City of Taft and the unincorporated communities of Taft Heights and Ford City which are adjacent to the south and north of the City of Taft. The unincorporated communities of Dustin Acres and Valley Acres are located approximately 10 miles northwest of the project site along State Route (SR-119). Access to the project site from Interstate 5 (I-5), which is located approximately 6 miles to east, is provide via Millux Road to South Lake Road, which has a “T” intersection with Santiago Road.

Project Background

Synagro is a national biosolids and residuals solutions services provider. The existing facility was approved by Kern County to establish a 100-acre composting facility at the South Kern Industrial Center (SKIC) under Conditional Use Permit (CUP) No. 2, Map No. 158 on October 22, 2002

(Resolution No. 2002-421). Synagro began operations in 2006. Under the original CUP, the facility was permitted to receive and process up to 670,000 wet tons of material per year (wtpy). The material is currently comprised of up to 400,000 wtpy of biosolids and preconsumer food waste and up to 270,000 wtpy of wood chips and agricultural waste products, such as pistachio and almond hulls, cotton gin waste, stable bedding, and screened green waste. The proposed CUP Modification does not proposed to change the total permitted annual WTPY of material accepted at the facility.

In preparation for development and use of the SKIC area, traffic impact studies were prepared for both the overall SKICSP development and specifically for the composting facility in 1992 and 2001, respectively. The 2001 traffic study established traffic volumes for the composting facility and used estimated daily traffic volume of 254 trucks and 100 passenger vehicles, totaling 354 average trips in and out of the facility per day. This study found that the anticipated traffic that would be generated from operation of the composting facility was within the limits anticipated for its development as a part of the land uses approved for the 1992 Specific Plan.

Current Operations

Composting activities currently only occur on approximately 44 acres of the overall 100-acre permitted site. Trucks are needed to transport materials to and from the facility which currently takes in approximately 530 tons of biosolids, 290 tons of green material and ships out 340 tons of finished product per day. Annually, this is approximately 193,000 tons of biosolids, 105,000 tons of green material and 124,000 tons of finished product. Materials arrive and are shipped at various times of day as needed. Once materials are off-loaded, arriving trucks are often reloaded with finished product for transport to customers. Once the finished project is off-loaded, the trucks are one again loaded again with feedstock for the inbound trip back to the composting facility. Depending on the type of material being hauled, the trucks can typically carry 20 to 25 tons of feedstock or compost.

Existing Traffic Volumes

Under worst case scenario assuming an empty truck for one of the travel legs, daily trips could range from a low of 4 to a high 190 per day. Based on the total loaded trips, a conservatively high estimate of the average number of truck trips per day, the traffic study found this resulted in approximately 98 trips (one-way), 21 loaded inbound for biosolids, 13 loaded inbound for bulk agents (green material) and 15 loaded outbound for finished product. **Table 4.15-1: 2019 Average Daily & Yearly Operations**, below, lists the average trips needed for operation of the facility. While the facility on average is generating 98 truck trips per day, under its CUP, it can receive up to 354 trips per day (of which 254 are generally designated for trucks).

Table 4.15-1: 2019 Average Daily & Yearly Operations

Truck Type	Average Trips/Day	Average Tonnage/Day	Average Tonnage/Year
All trucks (loaded & Unloaded)	98	1,220	422,000
Inbound (loaded) Trucks Biosolids	21	590	193,000
Inbound (loaded) trucks Bulk Agents	13	290	105,000
Outbound (loaded) trucks product	15	340	124,000

* Truck loads range from 20-25 tons per trip

** 254 Truck trips permitted per year under South Kern Industrial Center (SKIC) conditional use permit (CUP).

Existing Average Daily Trips

The current, average daily trips (ADT) volumes on roadways that would be used by trucks and employees to access the project site low. Roadway ADT volumes and capacities for the primary roadways utilized by project traffic are shown in **Table 4.15-2, Existing Roadway Average Daily Trip Volume**, below. With the exception of Old River Road, the roadway volumes are below 2,000 ADT, as determined from the Kern County Transportation Data Management System. The relatively low ADT is reflective of the absence of any major new developments in the area and the overall rural nature of the area, sparse development, and predominant uses as agricultural land.

Table 4.15-2: Existing Roadway Average Daily Trip Volume

Roadway	ADT		Capacity ¹
	1992	2017/2018	
Old River Road	--	4,427 ²	15,000
South Lake Road	350	1,003 ²	15,000
Millux Road	670	1,559 ²	15,000
Hill Road	530	1,559 ²	15,000
Interstate 5 SB Off Ramp	--	590 ³	9,000
Interstate 5 SB Off Ramp	--	620 ³	9,000
Interstate 5 NB Off Ramp	--	660 ³	9,000
Interstate 5 NB Off Ramp	--	600 ³	9,000

¹ Highway Capacity Manual

² Kern County Transportation Data Management System (via KernCOG).

³ Caltrans Division of Traffic Operations Traffic Census Program.

Operations of the existing composting facility occur 24 hours a day, 7 days per week. The facility has a total of 16 employees that are split into three shifts, including two management and administrative employees that are onsite during the first of the three shifts. Five employees work a morning shift, and four employees work an afternoon shift and a night shift. Vehicle use associated with operation of the facility occurs within the project footprint and includes truck maintenance and washing, administration offices, areas for receiving and mixing materials, compost additive storage, and an area for finished product. Aside from truck trips needed to ship materials, operations of the facility do not generate a consistent number of off-site vehicle trips. For the purpose of the traffic study, it was assumed that feedstock is received during all three shifts, and product is typically shipped out during the morning and afternoon shifts. Accordingly, and based on the site operations, the ADT and associated AM and PM peak our traffic, is shown in **Table 4.15-3, Trip Generation for Current (2019) Operations**, below.

Table 4.15-3: Trip Generation for Current (2019) Operations

Trip Type	ADT	AM Peak Hour		PM Peak Hour	
		In	Out	In	Out
Trucks	98	2	2	2	2
Employees	32	7	4	5	7
Total	130	9	6	7	9

4.15.3 Regulatory Setting

Federal

Federal Highway Administration

The FHWA supports State and local governments in the design, construction, and maintenance of the Nation's highway system. The strategic priorities of the administration are national leadership in transportation policy and innovation, effective delivery of the Federal highway programs, improved safety and performance of our Nation's highway systems, and enhancement of administration's corporate capacity to achieve its mission. The administration has developed a vehicle classification scheme that is separated into categories depending on whether the vehicle carries passengers or commodities and on the number of axles for each vehicle. There are 13 distinct vehicle classifications.

State

California Department of Transportation

Caltrans has jurisdiction over State highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. The following Caltrans regulations apply to potential transportation and traffic impacts of the proposed project:

- **California Vehicle Code (CVC), Division 15, Chapters 1–5 (Size, Weight, and Load):** Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.
- **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.
- **Project Development Procedures Manual, Chapter 27. Access Control Modification.** Requires Caltrans approval of proposed connections to a public road through submittal of a proposal to Caltrans (Caltrans, 2016).

The California Department of Transportation (Caltrans) owns and operates the State highway system, which includes the freeways and State routes within California. In proximity to the proposed project Caltrans maintains the I-5 freeway. Vehicle Miles Travelled (VMT) are now applicable to CEQA transportation analysis, which Caltrans recognizes may apply to projects on the State Highway System (SHS). Caltrans also recognizes that VMT is the most appropriate primary measure of transportation impacts for capacity increasing transportation projects on the SHS. VMT in the context of recent legislation and requirements related to CEQA are discussed below.

Senate Bill 743 (SB 743)

SB 743, approved in 2013, endeavors to change the way transportation impacts will be determined according to the California Environmental Quality Act (CEQA). The bill, which was codified in Public Resources Code section 21099 aims to promote the reduction of greenhouse gas (GHG) emissions, the development of multimodal transportation networks, and a diversity of land uses. The Governor's Office of Planning and Research (OPR) has recommended the use of VMT as the replacement for automobile delay-based Level of Service (LOS) for the purposes of determining a significant transportation impact under CEQA. As of December 2018, the Natural Resources Agency finalized updates to CEQA Guidelines to incorporate SB 743 (i.e., VMT). To assist in the implementation of VMT as the primary measure of a transportation impact under CEQA, the OPR published an updated Technical Advisory on Evaluating Transportation Impacts in CEQA in December 2018. Statewide application of the new guidelines went into effect on July 1, 2020.

Technical Advisory on Evaluating Transportation Impacts in CEQA

The Governor's Office of Planning and Research (OPR) released the Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) in December 2018. The Technical Advisory aids in the transition from LOS to VMT methodology for transportation impact analysis under CEQA. The advisory contains technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. Proposed Section 15064.3, subdivision (a) states that VMT refers to on-road passenger vehicles, not heavy-duty trucks.

Local

Kern County General Plan

The policies, goals, and implementation measures in the *Kern County General Plan Circulation Element* for transportation that are applicable to the project are provided below. The *Kern County General Plan* contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development, such as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference. The design LOS for Kern County is LOS C. The minimum LOS for conformance with the *Kern County General Plan* is LOS D.

Chapter 2 Circulation Element

2.1 Introduction

Goals

- **Goal 4:** Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.
- **Goal 5:** Maintain a minimum Level of Service (LOS) D for all roads throughout the County unless the roads are part of an adopted Community Plan or Specific Plan which utilizes Smart Growth policies that encourage efficient multi-modal movements.

2.3 Highways

2.3.3 Highway Plan

Goal

- **Goal 5:** Maintain a minimum LOS D.

Policies

- **Policy 1:** Development of roads within the County shall be in accordance with the Circulation Diagram Map. The chartered roads are usually on section and midsection lines. This is because the road centerline can be determined by an existing survey.
- **Policy 3:** The 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;
 Collector [Secondary Highway] Minimum 90-foot right-of-way;
 Commercial-Industrial Street Minimum 60-foot right-of-way; and
 Local Street [Select Local Road] Minimum 60-foot right-of-way.

Implementation Measure

- **Measure A:** The Kern County Planning and Natural Resources Department shall carry out the road network policies by using the Kern County Land Division Ordinance and Zoning Ordinance, which implements the Kern County Development Standards that includes road standards related to urban and rural planning requirements. These ordinances also regulate access points. The Kern County Planning and Community Department can help developers and property owners in identifying where planned circulation is to occur.

2.3.4 Future Growth

Goals

- **Goal 1.** To provide ample flexibility in this plan to allow for growth beyond the 20-year planning horizon.

Policies

- **Policy 2:** The County should monitor development applications as they relate to traffic estimates developed for this plan. Mitigation is required if development causes affected roadways to fall below LOS D. Utilization of the California Environmental Quality Act (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 if projected trips in any traffic zone exceed trips identified for this Circulation Element. Mitigation could involve exactions to build offsite transportation facilities. These enhancements would reduce traffic congestion to an acceptable level.
- **Policy 4:** As a condition of private development approval, developers, shall build roads needed to access the existing road network. Developers shall build these roads to County standards unless improvements along state routes are necessary then roads shall be built to California Department

of Transportation (Caltrans) standards. Developers shall locate these roads (width to be determined by the Circulation Plan) along centerlines shown on the circulation diagram map unless otherwise authorized by an approved Specific Plan Line. Developers may build local roads along lines other than those on the circulation diagram map. Developers would negotiate necessary easements to allow this.

- **Policy 5:** When there is a legal lot of record, improvement of access to County, city or State roads will require funding by sources other than the County. Funding could be by starting a local benefit assessment district or, depending on the size of a project, direct development impact fees.
- **Policy 6:** The County may accept a developer's road into the County maintained road system. This is at Kern County's discretion. Acceptance would occur after the developer follows the above requirements. Roads are included in the County road maintenance system through approval by the Board of Supervisors.

Implementation Measures

- **Measure C.** Project development shall comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.

2.5.1 Trucks and Highways

The Kern County road network handles a high ratio of heavy truck traffic. State highways carry most of this traffic. Most of the trucks are interstate carriers. As such, interstate trucking is not under the direct control of County officials. In as much as this traffic affects County residents and taxpayers, they need actions to guarantee state highways in Kern County receive a fair share of California's transportation investment.

Goals

- **Goal 1:** Provide for Kern County's heavy truck transportation in the safest way possible.
- **Goal 2:** Reduce potential overweight trucks.
- **Goal 3:** Use State Highway System improvements to prevent truck traffic in neighborhoods.

Policies

- **Policy 1:** Caltrans should be made aware of the heavy truck activity on Kern County's roads.
- **Policy 2:** Start a program that monitors truck traffic operations.
- **Policy 3:** Promote a monitoring program of truck lane pavement conditions.

Implementation Measures

- **Measure A:** Caltrans should further detail the need for improvement of pavement conditions on the State Highway System. This would encourage Caltrans implementation of the above Policies.

Chapter 4 Safety Element

4.6 Wildland and Urban Fire

Policies

- **Policy 4.** Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.

Southern Kern Industrial Center Specific Plan (SKICSP)

The proposed project is within the South Kern Industrial Center (SKIC). The SKIC consists of approximately 744 acres which are planned for in the SKIC Specific Plan (SKICSP). The SKICSP is located approximately 18 miles southwest of Bakersfield and approximately 7 miles east of Taft, in unincorporated Kern County. As noted above, the composting Facility was approved by Kern County under Conditional Use Permit No. 2, Map No. 158 (“Existing CUP”) on October 22, 2002 (Resolution No. 2002-421), along with a Supplemental Environmental Impact Report which was certified on the same date (collectively “Existing Entitlements”). Subsequent to the approvals, the Facility underwent construction and began operations in 2006.

The SKICSP was designed to achieve three primary goals; implement the Kern County General Plan, establish of development standards, and guide the planned development of the SKIC. The SKICSP contains general goals related to orderly growth and development, coordinated development with the Kern County General Plan, including goals and policies related to traffic and circulation.

In Kern County, specific plans, such as the SKICSP, are used to implement goals, objectives, and policies of the General Plan in a more detailed and refined manner unique to a smaller area of the County. Accordingly, the applicable goals and policies, within the SKICSP, are consistent with those contained in the applicable policies, goals, and implementation measures of the Kern County General Plan. Applicable goals policies related to transportation from Section IV Circulation Element, are shown below.

Goals

- **Goal 1:** To minimize the vehicle miles travelled to the greatest extent possible.
- **Goal 2:** To maintain public safety and efficient routes for anticipated traffic patterns.

Policies

- **Policy 2:** Encourage the use of public transportation and other alternative modes of transportation (i.e. employee vanpools and carpools), wherever possible, to reduce the amount of vehicle trips to and from the Specific Plan Area.

Implementation Measures

- **Measure 1:** Design and locate site access driveways to minimize traffic disruption wherever possible based on the subdivision of the land. Driveway access along Santiago Road shall not be closer than 330 feet.

- **Measure 2:** Minimize the impacts of development on the circulation system by reviewing all development plans through the Site Plan Review process with respect to their impacts on the transportation system roadway facilities, and required revisions as necessary.
- **Measure 8.** All parcels within the Specific Plan Area shall be served by roads deemed adequate for fire protection. The Kern County Fire Department shall be contacted during review of land divisions and/or Site Plans for Fire Department approval.
- **Measure 11:** Provide preferential parking spaces for carpools. This shall be a condition of the Site Plan Review Guidelines.
- **Measure 13:** On-site parking requirements shall conform to the minimum standards of the Kern County Zoning Ordinance.
- **Measure 25:** Any future development shall pay a proportionate share of the cost of improvements necessary to mitigate off-site traffic impacts prior to the issuance of certificate of occupancy. These improvements shall mitigate structural deficiencies, as well as roadway capacity impacts as identified in a traffic study submitted by the developer and approved by the Kern County Roads Department.

Kern Council of Governments

Kern COG is a Federally designated Metropolitan Planning Organization (MPO) and a State-designated Regional Transportation Planning Agency (RTPA). These designations formally establish Kern COG's role in transportation planning. Kern COG's Board of Directors comprises elected representatives from the 11 incorporated Cities and two members of the County Board of Supervisors. A Memorandum of Understanding between Kern COG and Caltrans District 6 also provides for a Transportation Planning Policy Committee, which is the existing Board plus ex officio members from Caltrans, Kern County's military bases, and Golden Empire Transit District. The Transportation Technical Advisory Committee (TTAC), composed of technical staff from member agencies, other interested agencies, public members, Caltrans, and the San Joaquin Valley and Kern County Air Districts, provides support to the Board of Directors. In addition, the Social Services Transportation Advisory Committee also provides support to the Board of Directors by focusing on the needs of transit-dependent and transit disadvantaged persons, including the elderly, disabled, and persons of limited means.

Kern Council of Governments Congestion Management Program

All urbanized areas with a population larger than 200,000 residents are required to have a congestion management system, program, or process. The Kern COG refers to its congestion management activities as the CMP. Kern COG was designated as the Congestion Management Agency.

The CMP provides a systematic process for managing congestion and information regarding (1) transportation system performance, and (2) alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet State and local needs. The purpose of the CMP is to ensure that a balanced transportation system is developed that relates population growth, traffic growth, and land use decisions to transportation system LOS performance standards

and air quality improvement. The program attempts to link land use, air quality, transportation, and advanced transportation technologies as integral and complementary parts of this region's plans and programs.

The purpose of defining the CMP network is to establish a system of roadways that will be monitored in relation to established LOS standards. At a minimum, all State highways and principal arterials must be designated as part of the Congestion Management System of Highways and Roadways. Kern County has 18 designated State highways.

Kern County Regional Transportation Plan

The latest RTP was prepared by Kern COG and was adopted August 16, 2018. The 2018 RTP is a 24-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It has been developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between Federal, State, regional, and local agencies. Included in the 2018 RTP is the Sustainable Communities Strategy (SCS) required by California's Sustainable Communities and Climate Protection Act of SB 375. The California Air Resources Board (CARB) set Kern County GHG emissions reductions from passenger vehicles and light-duty trucks at 5% per capita by 2020 and 10% per capita by 2035, as compared to 2005. In addition, SB 375 provides for closer integration of the RTP/SCS with the Regional Housing Needs Allocation (RHNA), ensuring consistency between low-income housing need and transportation planning. Kern COG engaged in the RHNA process concurrently with the development of the 2014 RTP. This process required Kern COG to work with its member agencies to identify areas within the region that can provide sufficient housing for all economic segments of the population and ensure that the State's housing goals are met.

The intent of the SCS is to achieve the State's emissions reduction targets for automobiles and light trucks. The SCS also provides opportunities for a stronger economy, healthier environment, and safer quality of life for community members in Kern County. The RTP/SCS seeks to improve economic vitality, improve air quality, improve the health of communities, improve transportation and public safety, promote the conservation of natural resources and undeveloped land, increase access to community services, increase regional and local energy independence, and increase opportunities to help shape the community's future.

The 2018 RTP/SCS financial plan identifies the amount of money available to support the region's transportation investments. The plan includes a core revenue forecast of existing Federal, State, and local sources along with funding sources that are considered to be reasonably available over the time horizon of the RTP/SCS. These new sources include adjustments to Federal and State gas tax rates based on historical trends and recommendations from two national commissions (the National Surface Transportation Policy and Revenue Study Commission and the National Surface Transportation Infrastructure Financing Commission), leveraging of local sales tax measures, local transportation impact fees, potential national freight program/freight fees, future State bonding programs, and mileage-based user fees.

The 2018 RTP promotes a more efficient transportation system that calls for fully funding alternative transportation modes, while emphasizing transportation demand and transportation system management approaches for new highway capacity. The Constrained Program of Projects includes

projects that move the region toward a financially constrained and balanced system. Constrained projects have undergone air quality conformity analysis to ensure that they contribute to the Kern County region's compliance with Federal and State air quality rules.

Kern County Airport Land Use Compatibility Plan (ALUCP)

The Kern County ALUCP establishes procedures and criteria to assist Kern County and affected incorporated cities in addressing compatibility issues between airports and surrounding land uses. The project site is not located within a designated Airport Land Use Compatibility zone.

4.15.4 Impacts and Mitigation Measures

Methodology

This section presents the methodologies used to perform the traffic analyses. The study methodology is was prepared to account for the changes in traffic conditions that could occur is the requested modification to the Conditional Use Permit (CUP) for the proposed project is approved. The overall methodologies used to develop future traffic volume forecasts and the explicit traffic operations analysis methodologies are summarized herein.

Analyses were performed based on the existing traffic volumes that were obtained from the Kern County Transportation Data Management System for 2017/2018 (Ruetters & Schuler, 2019), and includes an evaluation of roadway capacity and considered the existing conditions versus what is anticipated under the proposed project. Impacts of the proposed project were assessed based on the average daily trips, average AM and PM in and out trips, and evaluating the locations from where and to where composting materials and products are received and delivered, respectively.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated May 2019) identify the following criteria, as established in Appendix G of the State CEQA Guidelines, to determine if a project could potentially have a significant adverse effect on transportation and traffic. Both documents state that a project would normally be considered to have a significant impact related to transportation and traffic if it would:

- a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;
- b. Conflict or be inconsistent with State CEQA *Guidelines* Section 15064.3 (b);
- c. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- d. Result in inadequate emergency access.

Project Impacts and Mitigation Measures

Impact 4.15-1: The project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

The CUP No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) for the existing composting facility allows for a total of 354 trips per day and permitted receipt of up to 670,000 wtpy of composting materials (400,000 wtpy of biosolids and 270,000 wtpy of green material). The proposed project upon approval of the CUP, would enable the acceptance of a broader range of organic waste projects including the diversion of 75% diversion from landfills mandated by the State of California. The composting facility's employees primarily originate from the communities and unincorporated areas surrounding the project site and this is anticipated to continue as the project continues to operate. Feedstocks and finished product are collected and distributed between the facility and locations in Kern County, surrounding counties, and northern and southern California. Project generated traffic is limited to Millux Road, Hill Road, South Lake Road (east of the project site), which then accesses the project site by way of Santiago Road. Project related trips from out of county areas also would use Interstate-5 (I-5).

The proposed CUP modification would enable the composting facility to receive a broader range of organic waste totaling 670,000 wtpy; however, no increase in permitted tonnage or traffic volumes for the facility is requested. Truck trips would be added to transport the new feedstock materials and employees to receive and process the expanded feedstocks; however, since there will be no increase in allowable tonnage at the site, these trips are accounted for in the existing CUP. Approximately trucks 85 delivering the expanded feedstock and 46 trucks hauling the finished product would operate per day and account for the shift from biosolids to food waste and which requires more bulking agents for the composting process. These trips are within the total trips accounted for in the Original CUP as explained below. Feedstocks and bulking agents would originate from within Kern County (approximately 75%) and from the Los Angeles area (approximately 25%). If the modification to the CUP is approved, the project would be permitted to take in more food waste and increase the demand for more bulking agents, but would not exceed the already permitted inbound tonnage of 670,00 wtpy. It also is anticipated that the project would result in fewer trips from southern California and increase trips from within Kern County.

At the CUP tonnage limit capacity, the facility is anticipated to generate approximately 261 truck trips per day, which is less than the already permitted trips per day of 354. For the purposes of analysis, **Table 4.15-4, Trip Generation at CUP Tonnage Limit**, reflects this maximum number of anticipated trips. The analysis also takes into consideration that the use of more food waste will decrease the number of truck trips transporting biosolids and increase green material (bulking agent) truck trips.

Table 4.15-4: Trip Generation at CUP Tonnage Limit

Trip Type	ADT	AM Peak Hour		PM Peak Hour	
		In	Out	In	Out
Trucks	261	6	6	6	6
Employees	96	18	15	15	18
Total	357	24	21	21	24

¹ Based on the 670,000 wtpy of approved combined feedstock and product truck loads at 20-25 tons per truck, depending on the type of load.

² Carpool factor of 1.25 employees per vehicle applied.

As shown in **Table 4.15-4**, above, the daily increase in traffic as compared to current operations and available roadway capacity, is minimal and does not meet thresholds required for additional analysis under CEQA. It should be noted that the peak hour trips also do not meet the threshold established by Kern County, which is 50 peak hour trips. In addition, truck the trips would be distributed over a 24-hour period further reducing the peak numbers and spreading the trips over a longer period time.

The traffic generated by the proposed project, as well as the amount of wet-tons-per-year of food waste that is anticipated, is consistent with the trip generation previously approved under the existing CUP, is less than the total permitted wet tons per year of composting material and would not conflict with this planning element. As stated above, the existing CUP allows for a total of 354 trips per day and permitted receipt of up to 670,000 wtpy of composting materials (400,000 wtpy of biosolids and 270,000 wtpy of green material). Current truck trips are approximately 190 and under the revised CUP and additional materials, the project is anticipated to generate 71 new trips for a total of 261 truck trips. The proposed project also would require additional employees which would generate 64 new trips for a total of approximately 96 vehicle trips. In sum, the proposed project would result in a total project trips of 357.

The increase in vehicle trips would not result in the violation of any applicable program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities. Vehicles used to transport materials to and from the project site would use existing public roadways including those in the vicinity of the project that would experience the greatest travel volume increases (Millux Road, Hill Road, South Lake Road, and Santiago Road). Introduction of project related traffic, however, would be dispersed throughout the day and night and would not result in an exceedance of roadway capacities.

The proposed project would be within Kern County standards and would not result in an exceedance of 2,000 ADT on any roadways likely to be used by project related traffic with the exception of Old River Road which had an estimated ADT of 4,427 in 2017/2018 based on the Kern County Transportation Data Management System. The four roadways that would primarily be used to reach the project site (with the exception of Santiago Road, which provides direct site access) would remain well below the existing capacity of 15,000 ADT for each.

The original transportation report provided in the project's Final Environmental Impact Report (Final EIR) prepared in 1992, as well as the review conducted by Crenshaw Traffic Engineering in 2001 both indicated that neither the composting facility's operations, nor the roadway traffic volumes at that time, would result in any significant impacts. Because truck trips currently generated by the composting facility are only 53% of the traffic allowed under the existing CUP; the biosolids and green material are only 48% and 39%, respectively, of what is permitted under the CUP; the existing roadway traffic volumes are still very low (indicating an acceptable level of service); and the project traffic that may be associated with the broader waste stream will not exceed permitted levels, nor add a significant increase to existing traffic volumes; the CUP modification being requested is consistent with prior approvals and will not result in any new significant impacts.

Therefore, the proposed project would be consistent with the trips allowed by the facility's existing CUP, and the modified CUP would be issued for the project in accordance with all Kern County guidance and regulations. The project site is located in a rural area with no existing transit, bicycle,

or pedestrian facilities and would not result in any effects on these resources or ability of any plan, ordinance, or policy related to implementation of operation of such uses in this regard or any other. Impacts would be less than significant, and mitigation is not required.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Impact 4.15-2: The project would conflict or be inconsistent with CEQA Guidelines Section 15064.3.

As discussed in Impact 4.15-1, above, the proposed project is not located within proximity to a major transit stop, is not located along a major high-quality transit corridor, would not reduce vehicle miles travelled compared to existing conditions, is not a transportation project that would reduce or have no impact on transportation, nor has it been adequately evaluated in a programmatic EIR. Hence the proposed project would not be exempt from analysis and is not be presumed to have a less than significant impact under this impact criteria.

The Governor's Office of Planning and Research has adopted and published guidelines for implementation of AB 743 requirements in the "Technical Advisory on Evaluating Transportation Impacts in CEQA." The advisory provides guidance on the types of vehicle for which VMT analysis should be considered, and the volume of traffic below which the VMT impact would be considered less than significant. Regarding vehicle types, it states "For the purposes of this section, 'vehicle miles travelled' refers to the amount and distance of automobile travel attributable to a project." Here, the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks.

In addition, the guidance discusses screening thresholds for Small Projects and states, "Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a SCS or general plan, projects that generate or attract fewer than 110 trips per day generally be assumed to cause a less than significant transportation impact.

Therefore, while the proposed project would increase the trips and vehicle miles travelled (VMT), the truck trips needed to haul materials to and from the composting facility would be excluded from consideration in the analysis. As documented in the Addendum to the Traffic Study for the South Kern Compost Manufacturing Facility at South Kern County Industrial Complex, the passenger vehicle trips and associated VMT would be less than the 110-vehicle threshold. It should be noted that while the total passenger vehicle trips, if the CUP is approved and the facility is expanded would result in a total of 96 trips. However, because the existing facility generates approximate 32 vehicle trips, it would result in an increase of 64 compared to baseline conditions. Thus, the project is presumed to have a less than significant impact in this regard, and further evaluation and mitigation is not required.

Mitigation Measures

No mitigation measures are required.

Level of Significance

No mitigation measures are required.

Impact 4.15-3: The project would substantially increase hazards due to a design feature.

The proposed project does not include any roadway construction or any roadway improvements and would not affect any roadway geometric design features including sharp curves of dangerous intersections. The project also would not result in the creation of any obstacles to site distance during or post construction. South Lake Road intersects with Santiago Road and would be used for trips to and from the project site. At this location, both roadways are generally straight and generally void of visual obstructions. The proposed project would not introduce incompatible uses. All new trips, including worker as well as truck traffic would be consistent with existing vehicle traffic and all construction equipment would be uses within the existing composting facility and not on public roadways. The project would not impact roadway safety in this regard. Lastly, the proposed project would expand the feedstocks usable at the site and would not require the use of any new machinery or equipment that would result in a substantial increase in hazards from operation or as part of this expansion. This impact is considered less than significant, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Impact 4.15-4: The Project Would Result in Inadequate Emergency Access.

The project site is located in a rural area with the primary access roads allowing adequate egress/ingress to the site in the event of an emergency. Therefore, the development of the project would not physically interfere with emergency vehicle access or personnel evacuation from the site.

The proposed project site is substantially distanced from South Lake Road and would not result in any circulation impacts at the intersection with Santiago Road or other areas. Construction-related traffic would be minimal because the proposed project would not result in the construction of new structures or new development. Some vehicles would use the existing roadways to bring in new equipment and machinery, but this would not result in a substantial impairment of emergency access to the site or any other location. Similarly, the use of the new equipment and machinery would facilitate the composting operations and would not impede emergency access within the site. Some new truck and vehicle trips would occur, but this would be along existing roadways, would not be a substantial increase over existing trips or VMT, and also would not result in inadequate emergency access to the site or other location. Impacts in this regard would be less than significant and mitigation is not required.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts and Mitigation Measures

The analysis of cumulative impacts in this section includes all of the cumulative projects discussed in **Chapter 3, Project Description**. Projections of future traffic conditions incorporate regional population and employment growth that is expected to occur by the future analysis year, independent of the proposed project. The project is located in an area with sparse development and minimal vehicle traffic on area roadways.

Future development of Kern County would result in additional vehicle trips and contribute to congestion on local roadways that would likely be traveled by vehicles. This is would include cumulative project in the vicinity of the proposed project, those that would use similar roadways, and I-5. Due to the relatively low population density and lack of substantial development within the project area, the proposed project would not make a substantial contribution to cumulative vehicle trips. Projects with containing substantial volumes of residential development within Kern County are the primary drivers of cumulative traffic impacts. The proposed project does not include residential developments and no plans for large scale residential projects that would generate substantial vehicle miles travelled are proposed in the vicinity. As discussed under Impact 4.15-1, the traffic impact analysis of horizon year 2040 considers the potential for regional growth. Thus, the analysis and conclusions under Impact 4.15-1 also reflect a cumulative analysis and the project would not result in a significant contribution to LOS deficiencies in the surrounding road network.

The proposed project would add a total of approximately 135 trips, over existing vehicle trips needed for employees and trucks to haul materials to and from the project site. In conjunction with other past, present, and reasonably foreseeable projects that would use local roadways, the project contribution would not be substantial. Taken in sum, all past present and reassembly foreseeable projects would not substantially increase vehicle traffic or vehicle miles travelled such that a significant cumulative impact would result.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

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Section 4.16

Tribal Cultural Resources

4.16.1 Introduction

This section of the Draft Environmental Impact Report (EIR) provides contextual background information on historical resources within Kern County (County), including the area's prehistoric, ethnographic, and historical settings. This section analyzes the potential impacts associated with the implementation of the Synagro South Kern Compost Manufacturing Facility Project (proposed project) on cultural resources. This section provides an assessment of potential impacts related to tribal cultural resources that could result from implementation of the proposed project. The analysis in this section is based, in part, on consultation with the Native American Heritage Commission and Native American Tribes.

4.16.2 Environmental Setting

Refer to **Section 4.5, Cultural Resources**, of this EIR for a greater discussion of the tribal cultural resources environmental setting.

Existing Tribal Cultural Resources

Native American AB 52 Consultation

On October 23, 2019, Kern County sent consultation notification letters via certified mail to Native American groups on Kern County's Master List pursuant to the requirements of AB 52 pertaining to government-to-government consultation. **Table 4.16-1, Summary of AB 52 Consultation Efforts**, summarizes Kern County's consultation efforts to date. To date, Kern County has received one response. In response to Kern County's AB 52 notification, the San Manuel Band of Mission Indians Tribal Archaeologist, Alexandra McCleary, stated in an email dated November 1, 2019, that the proposed project is located outside of the Serrano ancestral territory and, as such, the Tribe will not be requesting consulting party status for this project.

Table 4.16-1: Summary of AB 52 Consultation Efforts

Tribe/Organization	Consultation Type	Date Letter Mailed	Response Received
San Manuel Band of Mission Indians	AB 52	10/23/19	The Tribe responded in an email dated November 1, 2019, that the project area is located outside of Serrano ancestral territory.
Tejon Indian Tribe	AB 52	10/23/19	No response
Torres Martinez Desert Cahuilla Indians	AB 52	10/23/19	No response
Twenty-Nine Palms Band of Mission Indians	AB 52	10/23/19	No response

4.16.3 Regulatory Setting

Federal

No Federal regulations are applicable for this issue area.

State

Native American Heritage Commission

Public Resources Code (PRC) Section 5097.91 established the NAHC, the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

Assembly Bill 52 and Related Public Resources Code Sections

AB 52 was approved by California State Governor Edmund Gerald “Jerry” Brown, Jr. on September 25, 2014. The act amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR) or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources update to CEQA Guidelines Appendix G, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency provide formal notification to the designated contact, or a tribal representative, of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency’s formal notification and the lead agency must begin consultation within 30 days of receiving the tribe’s request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project’s impacts on the tribal cultural resources; project alternatives or

appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2(b)).

If a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an EIR or adopt an MND (PRC Section 21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

Local

Kern County General Plan

Construction and operation of the project would be subject to the Kern County General Plan. The policies and implementation measures in the Kern County General Plan for tribal cultural resources applicable to the project are provided below. There are no policies and implementation measures specific to tribal cultural resources that are applicable to the project. Rather, the Kern County General Plan contains policies and implementation measures that are more general in nature and not specific to development, such as the project.

Chapter 1

1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservations

Policy

- **Policy 25:** The County will promote the preservation of cultural and historic resources that provide ties with the past and constitute a heritage value to residents and visitors.

Implementation Measures

- **Implementation Measure K:** Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.
- **Implementation Measure L:** The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.
- **Implementation Measure M:** In areas of known paleontological resources, the County should address the preservation of these resources where feasible.

- **Implementation Measure N:** The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.
- **Implementation Measure O:** On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.

Southern Kern Industrial Center Specific Plan (SKICSP)

The project site is located within the SKICSP, which was most recently amended October 22, 2002. The purpose of the SKICSP is to be used as a planning tool to closely define the planning criteria of the specific plan area and to define the nature and extent of growth and to ensure orderly development. The SKICSP was designed to achieve three primary goals; implement the Kern County General Plan, establish of development standards, and guide the planned development of the SKIC. At the time the SKICSP was written, CEQA did not require consideration of Tribal Cultural resources and were not specifically included. The SKICSP, however, does consider cultural resources and while different, can be used in consideration of these resources. The applicable policies related to tribal cultural resources SKICSP and are shown below:

General Overview

Policies

- **Policy 12:** Should any archaeological or historic resource be unearthed during construction, work shall be halted in the area of the discovery until the finds can be assessed by a qualified and certified archaeologist, approved by the County of Kern, so that appropriate mitigation measures to preserve the find can be carried out.

Environmental Resources Management Element

Policies

- **Policy 8:** Archaeologically, culturally, and biologically sensitive areas shall be protected, wherever feasible.

Implementation Measures

- **Implementation Measure 23:** Should any archaeological or historic resources be unearthed during construction, work shall be halted in the area of the discovery until the finds can be assessed by a qualified and certified archaeologist, approved by the County of Kern, so that appropriate mitigation measures to preserve the find can be carried out.
- **Implementation Measure 24:** If archaeological sites are found on the project site, the archaeologist shall report evidence to the California Archaeological Inventory Information Center-South Central Office

4.16.4 Impacts and Mitigation Measures

This section describes the methodology used in conducting the impact analysis for tribal cultural resources, the thresholds of significance used in assessing impacts to tribal cultural resources, and the assessment of impacts to tribal cultural resources, including relevant mitigation measures.

Methodology

This analysis is based in part on the County-wide cultural information that is publicly available. The evaluation of the project's potential effects on significant cultural resources is at the program level. This EIR sets forth research criteria and report content needed to enable a project-level evaluation of resource occurrences. Any individual projects resulting from this proposed project would be required to undergo a separate CEQA evaluation pertaining to project-specific details and would be required to adhere to the research criteria and report content set forth herein. Impacts to tribal cultural resources may include direct impacts resulting from ground disturbing activities or indirect visual impacts associated with the construction of above ground structures within the view shed of an identified tribal cultural resources.

To evaluate the project's potential effects on tribal cultural resources a consultation in accordance with the requirements for SB 18 and AB 52 via notification letters were sent to Native American groups and individuals who had previously requested notifications. The purpose of the letters was to solicit information regarding the presence of tribal cultural resources. Letters were sent to Twenty-Nine Palms Band of Mission Indians, Torres Martinez Desert Cahuilla Indians, San Manuel Band of Mission Indians, and Tejon Indian Tribe requesting notification if consultation was wanted. As of the publication of this EIR, no requests had been made.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in CEQA Guidelines Appendix G, to determine if a project could potentially have a significant adverse effect on tribal cultural resources.

A project would have a significant impact on tribal cultural resources if it would:

- 1) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - a. 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
 - b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Project Impacts and Mitigation Measures

Impact 4.16-1: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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 tribe that is

listed or eligible for listing in the CRHR, or in a local register of historical Resource as Defined in Section 5020.1(k).

As discussed in the 1992 EIR and the 2002 SEIR there were no identified significant historical resource, including resources of cultural significance within the project site. Since that time, the conditions related to cultural resources and cultural tribal resources has not changed. The County conducted the required government-to-government consultation efforts with interested Native American groups pursuant to AB 52. The result of the consultation did not result in the identification of tribal cultural resources within the project site. Given that no tribal cultural resources have been identified within or immediately adjacent to the project site, the project would not cause a substantial adverse change in the significance of a tribal cultural resource and no mitigation is required.

Mitigation Measures

No mitigation is required.

Level of Significance

Impacts would be less than significant.

Impact 4.16-2: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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 that is 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 2024.1 the lead agency shall consider the significance of the resource to a California Native American tribe.

As noted above, no cultural resources were identified on the site as part of previous evaluations. The County conducted the required government-to-government consultation efforts with interested Native American groups pursuant to AB 52. The result of the consultation did not result in the identification of tribal cultural resources within the project site. Given that no tribal cultural resources have been identified within or immediately adjacent to the project site, the project would not cause a substantial adverse change in the significance of a tribal cultural resource and no mitigation is required.

Mitigation Measures

No mitigation is required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

An analysis of cumulative impacts takes into consideration the entirety of impacts that the project discussed in Chapter 3, Project Description, of this EIR, would have on tribal cultural resources. The geographic scope for cumulative impacts to tribal cultural resources includes the southwestern region of the San Joaquin Valley. This geographic scope of analysis is appropriate because the potential for resources within this area are expected to be similar to those that occur on the project site because of their proximity; similar environments, landforms, and their location within the same Native American tribal territories. This is a large enough area to encompass any effects of the project on tribal cultural resources that may combine with similar effects caused by other projects, and provides a reasonable context wherein cumulative actions could affect tribal cultural resources.

The proposed project includes the installation of new equipment and expansion of above ground operations. Other projects are proposed throughout the region that is considered in terms of tribal cultural resources. Cumulative impacts to tribal cultural resources in the region could occur if other projects, in conjunction with the proposed project, had or would have impacts on cultural resources that, when considered together, would be significant.

Potential impacts of the project to tribal cultural resources, in combination with other projects in the area, could contribute to a cumulatively significant impact due to the overall loss of resources unique to the region. However, as discussed above, no tribal cultural resources have been identified in the project area and the project would not have an impact on tribal cultural resources. Therefore, the project would not have a cumulatively considerable contribution to impacts to tribal cultural resources.

Mitigation Measures

No Mitigation Measures are required.

Level of Significance

Cumulative impacts would be less than significant.

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Section 4.17 Utilities

4.17.1 Introduction

This section of the Environmental Impact Report (EIR) describes the affected environment and regulatory setting pertaining to utilities and service systems, which include water, wastewater, stormwater drainage, solid waste, electricity, telephone, and natural gas. Each subsection includes descriptions of existing facilities, service standards, potential impacts, and mitigation measures, where applicable. This section addresses water only in terms of supply services. Hydrology and water quality topics are covered in **Section 4.10, *Hydrology and Water Quality***, of this EIR.

4.17.2 Environmental Setting

As described in **Chapter 3, *Project Description***, the project site is an existing composting facility located at 2653 Santiago Road in unincorporated Kern County. The Project site is located approximately 12 miles east of the City of Taft and the unincorporated communities of Taft Heights and Ford City which are adjacent to the south and north of the City of Taft. The unincorporated communities of Dustin Acres and Valley Acres are located approximately 10 miles northwest of the project site along State Route (SR-119). The project site is located within the administrative boundaries of the 744-acre South Kern Industrial Complex Specific Plan (SKICSP). The composting facility operates under Conditional Use Permit (CUP) No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) and covers a 100-acre section within an approximate 155-acre parcel. Existing composting operations cover approximately 44-acres of the permitted 100-acre area. The proposed modifications to the CUP would allow the Facility to receive and manage newly defined types of organic waste streams for composting, as required by CalRecycle. To enable processing of the expanded feedstock as required by the regulations, the existing area used for composting operations may be expanded by approximately 56 acres, to utilize the full 100 acres that is permitted for composting by the existing CUP. The modification to the CUP; however, would not change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre Compost Facility permitted under the existing CUP.

Water Supply

There are typically three sources of potable and non-potable water: (1) natural sources; (2) manmade sources; and (3) reclamation. Natural sources include rivers, lakes, streams, and groundwater stored in aquifers. Manmade sources include runoff water that is treated and stored in reservoirs and other catchment structures. Reclaimed water is wastewater that has been conveyed to a treatment plant and then treated to a sufficient degree that it may again be used for certain uses (such as irrigation). However, unless subjected to substantial additional treatment, reclaimed water is not potable (drinkable) and must be conveyed in a separate system in order to ensure that there is no possibility of direct human consumption.

Water for the proposed project would primarily be provided through groundwater from existing on-site private wells. Site stormwater directed to a seeded retention basin is allowed to recharge the

ground water via infiltration / percolation and is used for landscape irrigation, and dust control. Water from the wells is already distributed within the project site via existing infrastructure through a series of pipes and pumps. The water supply is adequate to serve the existing project operations as well as supply potable water for employees. The existing project operation summary of groundwater consumption from 2012 through 2020 is presented in **Table 4.17-1, Operational Groundwater Consumption 2012-2020** below:

Table 4.17-1: Operational Groundwater Consumption 2012-2020

Ground Water consumption for Composting Activities	Volume (AFY)
Annual Average Total Usage	46.9
Annual Maximum Total Usage	72.1

Source: SKIC operating records, 2012 through 2020

The project will continue to utilize water from the Stormwater basin for landscape irrigation and dust control. Groundwater will also continue to be utilized for composting as well as support activities, such as biofilter humidification, maintenance washwater, dust control (when stormwater is not available), and fire suppression. Future water usage at the site will be associated with additional compost capacity and support activities, including rinse and washwater for food material pre-processing equipment. It is estimated that annual maximum groundwater consumption may approximately double up to 140 acre-feet per year based on the historic groundwater usage, and the permitted operating capacity. Annual average groundwater usage may increase to approximately 70 to 80 acre-feet per year. The volume of groundwater consumed is directly related to the volume of stormwater received and able to be used on-site. The proposed project construction, expansion of supplies, or extension of infrastructure for composting activities has been previously approved and this modification will not result in expansion of supply or extension of infrastructure outside of disturbed areas.

Groundwater Supply

The project area is situated near the southwestern end of the San Joaquin Valley Groundwater Basin (SJVGB), which lies within the San Joaquin River and Tulare Lake Hydrologic Regions (HRs). The SJVGB terminates at the Tehachapi Mountains to the south, extends north to the Delta, and is flanked on the east by bedrock of the Sierra Nevada range, and to the east by bedrock of the Coastal Range. More specifically, the project overlies the Kern County Subbasin (Subbasin) as defined by the California Department of Water Resources (DWR, 2006). The Kern County Subbasin is within the Tulare Lake Hydrologic Region and comprises an area of approximately 1,945,000 acres (3,040 square miles) in Kern County.

The Subbasin receives recharge water primarily from the eastern portion of its area, via stream channels and the Kern River. Other substantial sources of groundwater recharge include infiltration of irrigation water, which constitutes the primary means of recharge in the Subbasin, as well as various local groundwater banking programs, which provide localized groundwater recharge. These are not, however, located in close proximity to the project. DWR has characterized the Subbasin as

being in a state of critical overdraft, although the Subbasin was never adjudicated. According to DWR (2006), inflows to the Subbasin total approximately 1.5 million acre-feet per year (AFY), while total outflows comprise 1.4 million AFY.

Groundwater Quality

The primary aquifers in the Subbasin consist of alluvial sediments (mixtures of sand, silt, clay, cobbles, and boulders), and marine and continental deposits in the deeper portion of the aquifers. Downward flow of groundwater is impeded by a subsurface clay layer, known as the Corcoran clay, in the central part of Subbasin. The project site overlays this Corcoran clay unit. The primary sources of recharge are from the Kern River and artificial recharge at groundwater banking facilities that exist throughout most of the study unit. Secondary sources of recharge include return flows from agricultural and municipal irrigation and infiltration of flows from intermittent streams along the edge of the Subbasin. The primary sources of groundwater discharge are water pumped for irrigation and municipal supply (USGS, 2012).

A general measure of groundwater quality is total dissolved solids (TDS). For drinking water purposes, water with a TDS concentration of 500 milligrams per liter (mg/L) or less is recommended but can be usable up to 1,000 mg/L. Water quality in the western side of the basin contains primarily sodium sulfate and calcium-sodium sulfate. The shallow nature of the groundwater in the western portion of the basin results in elevated TDS concentrations. TDS concentrations in the Kern County subbasin average between 400 and 450 mg/L but can be up to 5,000 mg/L (DWR 2006).

Surface Water

The project site is relatively flat, sloping gently down to the north approximately 10 feet over a distance of approximately 1,300 feet. An existing six-foot-wide earthen berm surrounds the composting site and helps retain water on-site and prevents both run-off and run-on water to and from off-site areas. Stormwater within the Composting Facility is conveyed via existing drainage systems including drainage channels that conduct water to swales located on the inside of the berm and that conduct water to the northern side of the site. On the northern side of the site there is a retention basin for containment of process water and a storm water runoff. The basin is elongated and rectangular in shape (2,270 feet by 120 feet in width), approximately 2.5 acres in size, and borders almost all of the northerly project boundary. There are no natural streams or other natural waterways located on the project site or in the immediate vicinity of the composting area or within the overall area of the project parcel. The high local infiltration and evaporation rate, together with the moisture controls that are utilized in the existing Composting Facility's aerobic windrow process minimize the generation of leachate and ponding.

The retention basin has a base elevation of approximately 315 feet above mean sea level (amsl). This retention basin is operated in accordance with Central Valley RWQCB Order No. R5-2005-0077, which requires the Facility to have an onsite stormwater retention pond designed to wholly contain the 100 year, 24-hour storm event. Consequently, the Facility is engineered and designed to prevent off-site run-on and contain on-site runoff associated with a 100 year, 24-hour storm event. In this manner, drainage within the existing composting operations area is wholly contained within the bermed area, even during 100-year storm events.

Stormwater Drainage

As discussed in **Chapter 3, Project Description**, the climate in the area is semi-arid with total annual precipitation over the past 30 years averaging about 5.7 inches with a range of 1 to 14 inches. Rainfall occurs generally between the months of January and March. Occasional thunderstorms may occur in August, but do not account for much of the annual precipitation. Winter months are mild with temperatures averaging 20 degrees Fahrenheit (°F) to 50°F. Summers are harsh and dry with temperatures ranging from 60°F to over 100°F.

The topography of the project area is relatively flat, with gently rolling slopes located in the Antelope Plain, approximately 16.5 miles east of the Teblor Mountain Range. The elevation in the project area ranges from approximately 370 to 500 feet amsl. The disposal pits lie just west of the swale formed by the intersection of the easterly sloping Antelope Plain and the westerly slope of the Lost Hills Oil Field. The pits are subject to sheet flow runoff predominately from the west–southwest. A portion of the mine area was inundated during the floods of 1968–1969. However, to eliminate runoff to any pit during the course of historic/past landfilling operations, a 6- to 7-foot continuous earthen berm was constructed along the rim or perimeter of each pit. According to the most recent Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the area, the project site is located outside of an identified flood zone.

Sewer Services

The proposed project is not served by a municipal sewer system. Sanitary wastewater generated from the facility is treated by an existing septic system and is in place to continue to treat wastewater. A sewage treatment plant was included as a part of the South Kern Industrial Center Specific Plan (SKICSP), but it has not yet been constructed. This existing septic system is designed to accommodate the full operations of the plans and no new construction related to sanitary wastewater treatment facilities or infrastructure is proposed.

Solid Waste

Solid waste generally refers to garbage, refuse, sludge, and other discarded solid materials that come from residential, industrial, and commercial activities. Construction, demolition, and inert wastes are also classified as solid waste. Such wastes include nonhazardous building materials such as asphalt, concrete, brick, drywall, fencing, metal, packing materials, pallets, pipe, and wood. The general waste classifications used for California waste management units, facilities, and disposal sites are outlined below. Nonhazardous solid waste consists of organic and nonorganic solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes, and other discarded waste, provided that such wastes do not contain hazardous materials or soluble pollutants in concentrations that would exceed applicable water quality objectives or cause a degradation of waters of the state.

California State law regulates the types of waste that can be disposed of at the different classes of landfills. Class I landfills can accept hazardous and nonhazardous wastes. Class II landfills can accept designated and nonhazardous wastes, and Class III landfills can accept nonhazardous wastes.

Kern County is responsible for meeting the California Integrated Waste Management Act of 1989 (AB 939). AB 939 required cities and counties to reduce the amount of solid waste being sent to landfill by 50 percent by January 1, 2000. It also requires cities and counties to prepare solid waste planning documents. These documents include the Source Reduction and Recycling Element (SRRE), the Household Hazardous Waste Element (HHWE), and the Nondisposal Facility Element (NDFE). All three of these documents, as well as the Integrated Waste Management Plan, approved February 1998 by the California Integrated Waste Management Board (now California Department of Resources Recycling and Recovery or CalRecycle), have been approved for Kern County. The Kern County Integrated Waste Management Plan is the long-range planning document for landfill facilities.

Construction and demolition (C&D) waste is heavy, inert material. This material creates significant problems when disposed of in landfills. Because C&D waste is heavier than paper and plastic, it is more difficult for counties and cities to reduce the tonnage of disposed waste. For this reason, C&D waste has been specifically targeted by the State of California for diversion from the waste stream. Projects that generate C&D waste should emphasize deconstruction and diversion planning rather than demolition. Deconstruction is the planned, organized dismantling of a prior construction project, which allows maximum use of the deconstructed materials for recycling in other construction projects and sends a minimum amount of the deconstruction material to landfills.

The Kern County Public Works Department (KCPWD) provides the management of liquid and solid waste. Kern County currently operates seven recycling and sanitary landfills, nine transfer stations, and one bin site (KCPWD 2020). Waste streams arrive at disposal sites through either residential/urban collection or through transportation of waste by individuals to the sites. Accepted waste streams include appliances, construction material, dead animals, electronics, furniture, green waste, general waste, tires, treated wood, and used motor oil.

Solid waste generated from the proposed project would be collected at the facility and waste would continue to be hauled by a private waste hauler that directs the waste to the public landfill or transfer station to be recycled and/or disposed. It is likely that the project would be served primarily by the Taft Recycling and Sanitary Landfill, located at 13351 Elk Hills Road in Taft, approximately 12 miles northwest of the project site. The facility is also a Class III Landfill and maintains a maximum permitted throughput of 800 tons per day, a maximum permitted capacity of 11,000,000 cubic yards, and a remaining capacity of 7,380,000 cubic yards. The facility is permitted through December 2076 (CalRecycle, 2019a).

The other nearest landfill is Bakersfield Metropolitan (Bena) Sanitary Landfill, which is located at 2951 Neumarkel Road in Caliente, approximately 30 miles northeast of the project site. This Class III landfill accepts construction and demolition wastes, industrial wastes, and mixed municipal waste, as well as green waste for composting. The landfill has a maximum permitted throughput of 4,500 tons per day, a total permitted capacity of 53,000,000 cubic yards, with a remaining capacity of 32,808,260 cubic yards as of 2013 (CalRecycle, 2019b). The facility is permitted to continue operations through April of 2046.

Electrical Services

Most of the County's electrical energy is consumed by residential, commercial, industrial, agricultural, and transportation uses. Electric power supply and distribution for the proposed Project area is furnished by Pacific Gas & Electric (PG&E). The project site is currently served by existing electrical infrastructure and lines and internal distribution is extended into the existing site that provides electricity for project operations. These systems are sized to accommodate the development of the existing 100 acres site and no new service is anticipated.

Natural Gas

Natural gas is primarily consumed by the County's residential land uses for heating and cooking purposes. The entire proposed project site is within PG&E's service territory; therefore, natural gas may be provided by PG&E. The project site is not currently served by existing natural gas infrastructure and lines and internal distribution may be extended into the existing site to enable project operations.

4.17.3 Regulatory Setting

This regulatory framework identifies the Federal, State, and local statutes, ordinances, and policies that govern the utilities and service systems of the area and that must be considered by the Lead Agency during the decision-making process for projects that have the potential to affect utilities and service systems.

Federal

Clean Water Act (CWA)

At the federal level, the United States Environmental Protection Agency (USEPA) promulgates regulations that protect surface waters under the Water Pollution Control Act Amendments of 1972, commonly referred to as the Clean Water Act. These federal regulations, published in the Federal Register and codified in Code of Federal Regulations Title 40, establish wastewater treatment policies, effluent requirements for surface water disposal, and requirements for biosolids management and disposal. Regulations also set forth pretreatment requirements for preventing pollutants from entering publicly owned treatment works at levels that could interfere with treatment operation or solids management.

National Pollution Discharge Elimination System Permit

Discharge of treated wastewater to surface waters of the United States, including wetlands, requires a National Pollutant Discharge Elimination System (NPDES) permit. In California, the RWQCBs administer the issuance of these Federal permits. Obtaining an NPDES permit requires preparation of detailed information, including characterization of wastewater sources, treatment processes, and effluent quality. Additional information on the project's NPDES permitting requirements is presented in **Section 4.10, Hydrology and Water Quality**.

State

Regional Water Quality Control Board (RWQCB)

The primary responsibility for the protection of water quality, including stormwater, in California rests with the State Water Resources Control Board (SWRCB) and nine RWQCBs. The SWRCB sets statewide policy for the implementation of state and federal laws and regulations. The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans), which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The project site is within the jurisdiction of the Central Valley RWQCB.

California Department of Water Resources (DWR)

The DWR is a department within the California Resources Agency and is responsible for protecting, conserving, developing, and managing much of California's water supply. These duties include: preventing and responding to floods, droughts, and catastrophic events; informing and educating the public on water issues; developing scientific solutions; restoring habitats; planning for future water needs, climate change impacts, and flood protection; constructing and maintaining facilities; generating power; ensuring public safety; and providing recreational opportunities.

California Water Code Section 13260

California Water Code Section 13260 requires any person who discharges waste, other than into a community sewer system, or who proposes to discharge waste that could affect the quality of waters of the state to submit a report of waste discharge to the applicable RWQCB. Any actions of the projects that would be applicable under California Water Code Section 13260 would be reported to the Central Valley Regional RWQCB.

Sustainable Groundwater Management Act of 2014

The Sustainable Groundwater Management Act (SGMA) was enacted by the State in 2014 and requires that by January 31, 2020, "basins that are subject to critical conditions of overdraft shall be managed under a groundwater sustainability plan." The Act provides for the establishment of groundwater sustainability agencies (GSAs) that are meant to develop groundwater sustainability plans (GSPs) to monitor and regulate the interests of all beneficial uses and users of groundwater within each plan's management area. The Kern County Groundwater Subbasin is considered to be in a state of critical overdraft by DWR. Prior to enactment of the SGMA, the Kern Groundwater Authority (KGA) was established to provide a framework for the active, comprehensive management of the groundwater basin underlying the valley portion of Kern County. As such, groundwater use in the Subbasin is regulated by KGA's GSP. SGMA requires that a GSP achieve "sustainable groundwater management" and avoid "undesirable results," defined under Water Code Section 10721(w) as meaning: chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply; significant and unreasonable reduction of groundwater storage; significant and unreasonable seawater intrusion; significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies; significant and

unreasonable land subsidence that substantially interferes with surface land uses; and/or surface water depletions that have significant and unreasonable adverse impacts on beneficial uses of surface water.

Integrated Solid Waste Management Act of 1989 (Public Resources Code 40050, et. seq.) or Assembly Bill 939

Pursuant to the California Integrated Solid Waste Management Act of 1989, all cities in California are required to reduce the amount of solid waste disposed in landfills. Assembly Bill 939 required a reduction of 25 percent by 1995 and 50 percent by 2000. Contracts that include work that will generate solid waste, including construction and demolition debris, have been targeted for participation in source-reduction, reuse, and recycling programs. The applicant is urged to manage solid waste generated by the work to divert waste from disposal in landfills (particularly Class III landfills) and maximize source reduction, reuse, and recycling of construction and demolition debris.

Assembly Bill 341

Since the passage of AB 939, diversion rates in California have been reduced to approximately 65 percent, the statewide recycling rate is approximately 50 percent, and the beverage container recycling rate is approximately 80 percent. In 2011, the State passed AB 341, which established a policy goal that a minimum of 75 percent of solid waste must be reduced, recycled, or composted by the year 2020. The State provided the following strategies to achieve that 75 percent goal:

1. Moving organics out of the landfill;
2. Expanding the recycling/manufacturing infrastructure;
3. Exploring new approaches for state and local funding of sustainable waste management programs;
4. Promoting state procurement of post-consumer recycled content products; and
5. Promoting extended producer responsibility.

To achieve these strategies, the State recommended legislative and regulatory changes including mandatory organics recycling, solid waste facility inspections, and revising packaging. With regard to construction and demolition, the State recommended an expansion of California Green Building Code standards that incentivize green building practices and increase diversion of recoverable construction and demolition materials. Current standards require 50 percent waste diversion on construction and some renovation projects, although this may be raised to 65 percent for nonresidential construction in upcoming changes to the standards. The State also recommends promotion of the recovery of construction and demolition materials suitable for reuse, compost or anaerobic digestion before residual wastes are considered for energy recovery.

Assembly Bill 901

In 2015, then California Governor Brown signed AB 901 (Gordon, Chapter 746, Statutes of 2015) into law. This changed how organics, recyclable material, and solid waste are reported to CalRecycle. The Recycling and Disposal Facility Reporting System (RDRS) law requires the

following businesses to report directly to CalRecycle on a quarterly basis on types, quantities, and destinations of materials that are disposed of, sold, or transferred inside or outside of the state:

- Recycling facilities
- Composting facilities
- Disposal facilities including landfills
- Transformation facilities
- Engineered municipal solid waste conversion facilities
- Transfer/processor facilities
- Contract haulers
- Food waste self-haulers
- Brokers
- Transporters

In conformance with this requirement, the current operations have been reporting the volumes of waste/composting materials they have received and processed. In part, the intent of the data collection is to inform CalRecycle of the material flows within the State's recycling infrastructure; allow CalRecycle to better estimate total recycling and composting; and assist CalRecycle to track progress towards state goals and programs. This includes reaching the 75 percent recycling goal, as discussed AB 341, above and SB 1383, below. This information also is intended to allow CalRecycle to implement various improvements in areas such as increased responsiveness to changes in the recycling landscape, operational efficiencies, and the targeting of state resources to recycling infrastructure to foster a circular economy (CalRecycle, 2021).

Senate Bills 610 (Chapter 643, Statutes of 2001) and 221 (Chapter 642, Statutes of 2001)

SB 610 and SB 221 are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. They require that water supply assessments occur early in the land use planning process for all large-scale development projects. If groundwater is the supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during single and multiple dry years presented in 5-year increments for a 20-year projection.

Senate Bill 1383

SB 1383 establishes methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various sectors of California's economy. The new law codifies the California Air Resources Board's Short-Lived Climate Pollutant Reduction Strategy, established pursuant to SB 605, to achieve reductions in the statewide emissions of short-lived climate pollutants.

SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets

and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

California Solid Waste Reuse and Recycling Access Act of 1991 (California Public Resources Code Chapter 18)

The California Solid Waste Reuse and Recycling Access Act identified a lack of adequate areas for collecting and loading recyclable materials, resulting in a significant impediment to diverting solid waste. This act requires State and local agencies to address access to solid waste for source reduction, recycling, and composting activities. Each local agency must adopt an ordinance related to adequate areas for collecting and loading recyclable materials for development projects.

California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California.

California Energy Commission

The California Energy Commission (CEC) regulates the provision of natural gas and electricity within the State. The CEC is the State's primary energy policy and planning agency. Created in 1974, the CEC has five major responsibilities: forecasting future energy needs and keeping historical energy data, licensing thermal power plants 50 megawatts (MW) or larger, promoting energy efficiency through appliance and building standards, developing energy technologies and supporting renewable energy, and planning for and directing the State response to energy emergencies.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. In 1911 the CPUC was established by Constitutional Amendment as the Railroad Commission. In 1912 the Legislature passed the Public Utilities Act, expanding the Commission's regulatory authority to include natural gas, electric, telephone, and water companies, as well as railroads and marine transportation companies. In 1946 the Commission was renamed the California Public Utilities Commission. It is tasked with ensuring safe, reliable utility service is available to consumers, setting retail energy rates, and protecting against fraud.

Local

San Joaquin Valley Air Pollution Control District

Rule 4565

On March 15, 2007, the San Joaquin Valley Air Pollution Control District (SJVAPCD) adopted Rule 4565 pertaining to biosolids management. This rule governs land application, alternate daily cover, and composting and regulates the use of animal manures. One outcome of the rule is that it eliminates the option of using biosolids or biosolids-derived material as landfill alternate daily cover within the SJVAPCD boundaries, unless the operator has received an Authority to Construct (ATC) permit authorizing such cover. It should be noted that the current project is not utilizing biosolids for

alternative daily cover during disposal operations. This rule also requires that biosolids accepted for disposal at a landfill facility shall either be buried within 24 hours of receipt, or else covered temporarily with a tarp or earthen fill. It should be noted the proposed project would be complying with this requirement to control excess volatile organic compound (VOC) emissions.

Rule 4566

On August 18, 2011, the SJVAPCD adopted Rule 4566 pertaining to composting facilities that compost and/or stockpile organic material. This rule governs stockpiling of organic waste, imposes operational requirements on composting operations, requires recordkeeping of organic material flow, and includes other administrative and operational requirements.

Kern County Integrated Waste Management Plan

The Kern County Public Works Department (KCPWD) is required by the State to plan and implement waste management activities and programs in the unincorporated area of the County to assure compliance with AB 939 and subsequent State mandates. The Kern County Integrated Waste Management Plan (IWMP) includes a Source Reduction and Recycling Element, Household Hazardous Waste Element, and Non-disposal Facility Element. The Plan was approved February 1998 by the California Integrated Waste Management Board (now California Department of Resources Recycling and Recovery or CalRecycle). The Kern County IWMP is the long-range planning document for landfill facilities (Kern County 2015)

Kern County Construction Diversion Requirements per the California Green Building Code

As part of compliance with the CALGreen Requirements that took effect beginning January 2011, Kern County implemented the following construction waste diversion requirements:

- Submittal of a Construction Waste Management Plan prior to project construction for approval by the Kern County Building Department;
- Recycling and/or reuse of a minimum 50% of construction & demolition waste; and
- Recycling or reuse of 100% of tree stumps, rocks and associated vegetation and soils resulting from land clearing.

Kern County Public Works Department Recycling Programs

The Waste Operations Division of the Kern County Public Works Department administers or sponsors the following recycling programs, which contribute toward meeting State-mandated solid waste diversion goals to achieve 75% recycling, composting, or source reduction of solid waste by 2020 (Kern County Public Works Department 2021):

- Recycling programs at landfills to recycle or divert a wide variety of products, such as wood waste, cathode ray tubes, tires, inert materials, appliances, etc.;
- Drop-off recycling centers for household recyclables. The County- and the Cityoperated drop-off recycling centers, which are located in the unincorporated metropolitan area and the city, may be used by both County and city residents;
- Financial assistance for operation of the City of Bakersfield Green Waste Facility;

- The Kern County Special Waste Facility for the disposal of household hazardous waste. Services are provided to all Kern County residents;
- Semi-annual “bulky waste” collection events, which are held in the Bakersfield area and available to both County and city residents (co-sponsor); and
- An innovative elementary school program called the “EcoHero Show.”

Kern County General Plan

The policies, goals, and implementation measures in the Kern County General Plan that are applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development, such as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

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

Section 1.4 Public Facilities and Services

Goal

- **Goal 1.** Kern County residents and businesses should receive adequate and cost-effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.
- **Goal 9.** Serve the needs of industry and Kern County residents in a way that does not degrade the water supply and the environment and protect public health and safety by avoiding surface and subsurface nuisances resulting from the disposal of hazardous wastes, irrespective of the geographic origin of the waste.

Policies

- **Policy 1.** New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements require to service such development.
- **Policy 3.** Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.
- **Policy 11.** A solid waste disposal facility (Map Code 3.4) and other waste facilities (Map Code 3.7) shall pay its pro-rata share of upgrading of pertinent County roads.
- **Policy 12.** For solid waste disposal facilities, all necessary permits shall be obtained from the Kern County Environmental Health Services Department, Kern County Waste Management Department, State of California Integrated Waste Management Board, State of California Regional Water Quality Control Board, the appropriate Air Pollution Control District, and all other responsible agencies prior to the commencement of operations.
- **Policy 15.** Prior approval of any discretionary permit, the County shall make the finding, based on information provided by CEQA documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.

Implementation Measures

- **Implementation Measure C.** Project developers shall coordinate with the local utility service providers to supply adequate public utility services.
- **Implementation Measure D.** Involve utility providers in the land use and zoning review process.

Section 1.10.1 – General Provisions, Public Services and Facilities

Policies

- **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 Public Health Services Department and the California Regional Water Quality Control Board. The County's Public Health Services 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 13290-13291.70 (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.

Implementation Measures

- **Implementation Measure C.** Project developers shall coordinate with the local utility services providers to supply adequate public utility services
- **Implementation Measure D.** Involve utility providers in the land use and zoning review process.
- **Implementation Measure E.** All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply, and Preservation of Environmental Health Rules and Regulations administered by the County's Public Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site-specific documentation that characterize the quality of upper groundwater in the alternative septic systems would adversely impact groundwater quality. If the evaluation indicated that the uppermost groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant would be required to supply sewage collection, treatment, and disposal facilities.

South Kern Industrial Center Specific Plan (SKICSP)

The proposed project is within the South Kern Industrial Center (SKIC). The SKIC consists of approximately 744 acres which are planned for in the SKIC Specific Plan (SKICSP). The SKICSP is located approximately 18 miles southwest of Bakersfield and approximately 7 miles east of Taft, in unincorporated Kern County. The composting Facility was approved by Kern County under Conditional Use Permit No. 2, Map No. 158 (Existing CUP) on October 22, 2002 (Resolution No. 2002-421), along with a Supplemental Environmental Impact Report which was certified on the same

date (collectively “Existing Entitlements”). Subsequent to the approvals, the Facility underwent construction and began operations in 2006. The project site is located within the SKICSP, which was most recently amended June 22, 2021 under SPA 159 Map 500. The purpose of the SKICSP is to be used as a planning tool to closely define the planning criteria of the specific plan area and to define the nature and extent of growth and to ensure orderly development. The SKICSP was designed to achieve three primary goals; implement the Kern County General Plan, establish of development standards, and guide the planned development of the SKIC.

Measures contained in the SKICSP related to the availability, safety, and financial responsibility of utility systems. In Kern County, specific plans, such as the SKICSP, are used to implement goals, objectives, and policies of the Kern County General Plan in a more detailed and refined manner unique to a smaller area of the County. Accordingly, the applicable goals and policies, within the SKICSP, are consistent with those contained in the applicable policies, goals, and implementation measures of the Kern County General Plan. Applicable goals and policies related to utilities are listed below:

Public Facilities and Services Element

Policy

- **Policy 2.** Utilize financing methodologies which enable the installation of improvements and infrastructure which otherwise would be economically infeasible for the individual developer to construct.

Implementation Measures

- **Implementation Measure 1.** Developer shall prepare comprehensive plans to supply adequate utilities and infrastructure as new development occurs and prior to Site Plan approval.
- **Implementation Measure 5.** All improvements required to provide water service to the plan area shall be financed and constructed through an appropriate method determined by the landowners, successors, or assigned. The community water system shall be owned and operated by either a mutual water company, a governmental body, or public utility, as required by the Kern County Development Standards.
- **Implementation Measure 7.** The individual developers of each parcel within the plan area shall be responsible for the installation of all on and off-site improvements required to provide water service to the parcel, with the exception of the community water pumping, storage and delivery system facilities.
- **Implementation Measure 11.** Prior to the issuance of building permits, the method of sewer disposal and water supply shall require approval by the Kern County Department of Environmental Health Services.
- **Implementation Measure 20.** All water wells required for this project shall be under permit of the Kern County Department of Environmental Health Services. Construction shall comply with drilling and completion requirements of the Kern County Department of Environmental Health Services.
- **Implementation Measure 23.** All water shall be metered.

Environmental Resource Management Element

Goals

- **Goal 1.** To ensure and protect a safe and adequate supply of water for the Specific Plan area.
- **Goal 3.** To provide for adequate, safe, and cost-effective disposal of wastewater.

4.17.4 Impacts and Mitigation Measures

Methodology

Potential impacts to utilities were evaluated based on a comparison of the current needs for services to what would be needed under the proposed project improvements and additional machinery that would be installed to facilitate use of the expanded feedstocks. This includes the existing supplies and distribution systems for water, natural gas, and electrical services, as well as the wastewater and stormwater drainage, and disposal of solid waste based on existing landfill capacity. In addition, current data obtained from the County and State of California about the capacity of landfills was used to identify potential solid waste impacts. The evaluation of impacts in this analysis is based on professional judgement, analysis of the County's land use policies, and significance criteria established in Appendix G of the CEQA Guidelines, which the County has determined appropriate for the EIR.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the State CEQA Guidelines, to determine if a project could potentially have a significant adverse effect related to utilities and service systems.

The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to utilities and service systems if it would:

- 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 insufficient 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 inadequate 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. Fail to comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.

Project Impacts and Mitigation Measures

Impact 4.17-1: The project would 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.

An existing composting facility is located within the project site and obtains water from existing on-site private wells. Water from the wells is used for composting operations and functioning of the site. The proposed project does not propose any new water supply wells nor the expansion of existing water infrastructure within any previously undisturbed areas. Groundwater usage for composting as well as support activities, such as biofilter humidification, equipment rinse water and maintenance washwater, dust control, and fire suppression will continue up to an estimated annual maximum usage rate of 140 acre-feet per year, but should average approximately 70 – 80 acre-feet-per-year. Some minor water distribution improvements may be needed within the footprint of the existing composting facility.

The proposed project utilizes an existing septic system for treatment of wastewater. The system would continue to be used under the proposed project and no expansion of the existing wastewater infrastructure would be required. Therefore, no significant environmental effects would occur.

The proposed project is in a rural area that consists of mostly undeveloped area consisting of farmland, a solar facility, and petroleum infrastructure. Because the site and surrounding areas are largely undeveloped there are no municipal stormwater drainage facilities. Although the surrounding area is relatively flat and devoid of substantial topography, stormwater that does not infiltrate the ground of the surrounding areas would generally move via sheetflow following the contours of the land. The surrounding areas do contain agricultural drainages and ditches that convey water along the margins of the fields and generally to the north with the slope of the land. Due to the absence of substantial topography and large drainages, most stormwater would be anticipated to infiltrate, or in larger storm events, pond, and then infiltrate or evaporate.

Existing composting operations cover approximately 44-acres of the permitted 100-acre Facility. The proposed modifications to the CUP would allow the Facility to receive and manage newly defined types of organic waste streams for composting, as required by CalRecycle. To enable processing of the expanded feedstock as required by the regulations, the existing area used for composting operations may be expanded by approximately 56 acres as permitted by the existing CUP. This modification to the CUP; however, would not change the total volumes of materials allowed to be received and processed, nor would it change the size or boundary of the original 100-acre Compost Facility permitted under the existing CUP. The proposed project would not include any new impervious surfaces that would increase the volume or rate of stormwater runoff discharged offsite. In addition, there are no proposed changes to the existing pattern of runoff, and no new improvements to the existing drainage patterns are required.

The Facility currently captures all stormwater and process water through an existing on-site drainage system. Stormwater from the active composting area would continue to be managed entirely on-site with the existing drainage system and in accordance with RWQCB requirements. Stormwater runoff generated from the new feedstocks would be collected onsite and drained to the existing stormwater

conveyance system. No new construction of storm water drainage facilities either on-site or off-site are proposed. Rainwater would continue to infiltrate the undeveloped portion of the site and no elements of the amended CUP would increase the rate or volume of runoff beyond that which was studied and approved with the original CUP. Impacts would be less than significant, and mitigation is not required.

The project site is already served by electricity from PG&E, and existing telecommunication infrastructure that is extended into the project site from off-site service lines. New facilities and equipment that would be installed within the site would utilize the existing service lines as needed. If improvements are needed, all work would occur within the approved facility boundary. Impacts would be less than significant, and mitigation is not required.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Impact 4.17-2: The project would have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

The proposed project would not substantially increase demand for potable water for either construction or operations. Construction would include installation of machinery equipment, and the new structures that may be built to accommodate the receiving and processing of the expanded feedstocks. Construction activities would occur in areas previously disturbed that will require watering for dust control. In addition, because construction would be limited, water use associated with truck wheel washing, equipment washing, soil compaction, and fire safety, would not be required or be incrementally small and served by the existing entitlements.

Water for project site operations would continue to utilize water from the existing private wells. The additional types of “mixed materials” and organic wastes would include all types of food material (including post-consumer food waste, food-soiled paper, compostable plastics), and digestate consistent with current regulations. Operations of the projects site composting demand and use of the expanded feedstocks would maintain the 670,000-ton capacity of the facility would not substantially increase the volume of water needed for the proposed composting operations. Because existing site uses would be substantially the same, impacts would be less than significant, and mitigation is not required.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Impact 4.17-3: The project would 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 demand in addition to the providers existing commitments.

The proposed project is not served by a municipal wastewater provider and currently uses a septic system for wastewater disposal. There are no municipal wastewater service lines within or adjacent to the project site and tying into such as system is not proposed nor is it feasible. The proposed project would continue to use the existing septic system, and therefore, there would be no impacts to a wastewater treatment provider, and mitigation is not required.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Impact 4.17-4: The project would 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.

The proposed project is anticipated to be served primarily by the Taft Recycling and Sanitary Landfill, located at 13351 Elk Hills Road in Taft, approximately 12 miles northwest of the project site. The other major solid waste disposal site in the vicinity of the project that may serve the project is the Bena Sanitary Landfill, approximately 30 miles northeast of the project site. The proposed project may include minor grading and earthwork of the project site to expand operations into the entire 100-acre permitted area and also allow for the installation of new machinery and equipment that would enable expansion of feedstocks uses at the site. Because of these substantial volumes of typical construction debris materials such as drywall, wood, concrete, etc., would not be produced when the project improvements are made. The small amount of solid waste generated by construction activities is not expected to exceed the capacity of the nearby landfills. Operations of the proposed project also would not substantially increase solid waste generation. While new employees would use the site and would be anticipated to result in some new waste generation, this volume would be minimal and largely consist of food waste and other paper products and materials used to transport lunches. Lastly, both the Taft Recycling and Sanitary Landfill and the Bena Sanitary Landfill facilities maintain substantial available capacity and are permitted until 2046, and 2076, respectively. Although the existing landfills have adequate capacity, implementation of Mitigation Measure **MM 4.17-1** would ensure the separation and proper disposal of recyclable materials and solid waste with the retainment of an onsite recycling coordinator

Mitigation Measure **MM 4.17-2** provides for applicable payment and reporting procedures to ensure that project demand does not exceed the existing capacity of solid waste facilities. This is in compliance with AB 901 which requires reporting of volumes of received materials to CalRecycle. Conformance with this requirement also will provide data and information (i.e. types of materials received) to CalRecycle and assist in reaching the goal 75% recycled materials by 2025.

Therefore, the project would not generate a significant amount of solid waste during operation. would not exceed the permitted capacity of local landfills, and will further assist in reducing future waste flows to landfills through compliance with legislation. Impacts would be less than significant with mitigation incorporated.

Mitigation Measures

MM 4.17-1: During construction and operation, debris and waste generated shall be recycled to the extent feasible.

- a. An onsite Recycling Coordinator shall be designated by the project proponent to facilitate recycling as part of the Maintenance, Trash Abatement and Pest Management Program.
- b. The Recycling Coordinator shall facilitate recycling of all construction waste through coordination with contractors, local waste haulers, and/or other facilities that recycle construction/demolition wastes.
- c. The onsite Recycling Coordinator shall also be responsible for ensuring wastes requiring special disposal are handled according to State and County regulations that are in effect at the time of disposal.
- d. Contact information of the coordinator shall be provided to the Kern County Planning and Natural Resources Department prior to issuance of building permits.

MM 4.17-2: The owner/operator of the project shall continuously comply with all of the following provisions.

- a. The reporting and payment provisions below shall commence within 10 days of the facility receiving a revised Solid Waste Facility Permit from California Department of Resources Recycling and Recovery permitting the facility, among other things, to receive food materials for preprocessing at the project. A copy of the issued permit shall be provided to the Kern County Planning and Natural Resources Department and Kern County Public Works Department – Operations Division.
- b. A monthly report showing the tonnage and origin of inbound material shall be provided by the owner/operator of the project to the Kern County Public Works Department – Operations Division on or before the 15th day of the following month.
- c. With 60 days prior written notice, the owner/operator of the project will process up to 10 percent of the operating capacity of Acceptable Material, including Food Material, originating within the County that is received at any Kern County operated facility and transported to the South Kern Industrial Center, LLC Project Site by Kern County or its transportation contractors. All materials delivered to the Facility shall meet Facility standards applicable to all customers and meet all applicable quality standards related to the amount of contaminants. The fee charged to the County will be the then-current market rate for materials of similar quality and subject to a contract that will be negotiated between the County and Facility Operator prior to the start of deliveries.

- d. Kern County hereby imposes a host fee payable by the owner/operator of \$0.25 for each ton of out-of-County material of any type accepted at the composting facility. This fee shall commence 60 days after the CUP Amendment becomes final and non-appealable. On July 1, 2022, and each July 1 thereafter, the host fee shall be adjusted by the annual percentage change in Consumer Price Index over the 12-month period ending on the immediately preceding March 31. The \$0.25 fee shall be directed to the General Fund for the Board adopted Kern County Westside Economic Stability and Tourism Reinvestment Zone for use in that area for improvements to the community including, but not limited to, street lights, park and library improvements, road infrastructure and improvements, community programs, nuisance abatement and other community benefits. Determination of the use of the money shall be as established by the Kern County Westside Economic Stability and Tourism Reinvestment Zone Map. This mitigation funding will not be affected or stopped by any declaration of a Fiscal Emergency by the Board of Supervisors that temporarily stops property and sales tax contributions to the fund, as mitigation funding shall continue to be collected and spent.
- e. Kern County hereby imposes a fee, payable by the facility's owner/operator, of \$100 per ton ("Fee") for compost facility residual material that goes to "Disposal" -as reported to the state of California pursuant to 14 CCR Section 18815.1, et seq. ("Code"), The Fee is to be paid to Kern County Public Works Department to help fund additional recycling and diversion efforts to mitigate the increase in Kern Unincorporated disposal tonnage. Payment will be due to the Kern County Public Works Department at the end of each quarter based on the residual disposed of from the composting operation as reported to the State of California.

Level of Significance after Mitigation

With the implementation of Mitigation Measures **MM 4.17-1** and **MM 4.17-2**, impacts would be less than significant.

Impact 4.17-5: The project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste.

The proposed project would generate a small amount of solid waste during construction and, to a lesser extent, during operation. As discussed above, although minimal, construction waste may include metals, masonry, plastic pipe, rocks, dirt, cardboard, or green waste. The 1989 California Integrated Waste Management Act (AB 939) requires Kern County to attain specific waste diversion goals. In addition, the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires expanded or new development projects to incorporate storage areas for recycling bins into the project design. While the proposed project does not include new construction, the site contains existing recycling bins that would be maintained on site.

In September 2016, Governor Brown signed SB 1383 establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants, including methane emissions reductions from organic wastes. SB 1383 established targets to achieve a 50 percent reduction in the level of the statewide disposal of organic wastes (compostable feedstocks, green materials, food material, vegetative food material, etc.) from the 2014 level by 2020 and a 75 percent

reduction by 2025. The project is a function of the implementation of SB 1383 and serves as an effort to meet State mandates and meet the regional needs for organics handling and processing. Therefore, the project would comply with federal, State, and local regulations and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts and Mitigation Measures

Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. **Section 3.6, Cumulative Projects**, of this EIR discusses cumulative projects near the project. (**Table 3-4, Cumulative Projects List**, in **Chapter 3, Project Description** lists specific projects considered in the cumulative impact analysis). The geographic scope for cumulative impacts to utilities and service systems includes closely related past, present, and reasonably foreseeable probable future projects. There is one similar project underway in Kern County (approximately 8 miles north of the proposed project).

Significant cumulative impacts to public services would occur if the cumulative projects would overburden the public service agencies and if utility providers were unable to provide adequate services. The proposed project, taken in conjunction with other past, present, and reasonably foreseeable projects in the vicinity would not substantially increase the demand for water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities services. The proposed project is not expected to significantly impact Kern County landfills due to the limited amount of solid waste that would be generated by the project. Further, the project would help to divert additional organic waste from existing landfills, thereby reducing the total volume of waste likely to be stored in regional landfills. To further ensure that the proposed project reduces the amount of waste sent to landfills to the maximum extent practicable, implementation of Mitigation Measure **MM 4.17-1** requires that debris and waste generated shall be recycled to the extent feasible, and an onsite recycling coordinator be designated by the project proponent to facilitate recycling efforts. Implementation of Mitigation Measure **MM 4.17-2** would ensure the applicable payment provisions and reporting procedures would ensure that project demand does not exceed the existing capacity of solid waste facilities. Implementation of Mitigation Measures **MM 4.17-1** and **MM 4.17-2**, identified above, would further reduce cumulative impacts. In addition, public agencies and utilities have the opportunity to respond to an inquiry for information regarding potential increase in demand on their services. Development fees are assessed on a project-by-project basis to mitigate for the increase in demand on utilities. Incorporation of mitigation measures to these projects are anticipated to reduce impacts from other projects. The project itself would not make a substantial contribution to utility demands, and impacts would be less than significant at the cumulative level.

Mitigation Measures

Implementation of Mitigation Measures **MM 4.17-1** and **MM 4.17-2** would be required.

Level of Significance after Mitigation

With the implementation of Mitigation Measures **MM 4.17-1** and **MM 4.17-2**, impacts would be less than significant.

Section 4.18

Wildfire

4.18.1 Introduction

The purpose of this section is to identify, to the extent feasible, the potential for wildland fires in connection with the proposed project site and to identify potential risks to human health to workers and visitors of the proposed project. The analysis in this section is based on review of the project plans, information from the California Department of Forestry and Fire Protection (CAL FIRE), and CAL FIRE Kern County Fire Hazards Severity Zone (FHSZ) Maps, and the Kern County Fire Department (KCFD) Wildland Fire Management Plan.

4.18.2 Environmental Setting

The existing 44-acre composting facility is within a 155-acre parcel. Of the 155 acres, the existing Conditional Use Permit (CUP) No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) authorizes a 100-acre compost facility, of which 44 acres has been constructed. Only the composting facility is developed, and the balance of the site consists of sparsely vegetated industrial land that is disked for vegetation control. The surrounding areas consist of vacant and undeveloped land, a solar facility and petroleum facility. The project site does not contain any areas with thick vegetation and the surrounding areas, as discussed, are heavily disturbed and vacant.

Kern County is susceptible to fires, especially within those areas where development occurs adjacent to wildlands, including grasslands and forest lands. Historically, the County has experienced many wildland fires which continue to be a major threat to residents, visitors, and businesses, particularly during the dry and hot summer weather. The potential for fire hazards increases as the population grows and the demand for housing and businesses increases, particularly in the urban interface areas.

Fire plays an important role in many ecosystems throughout the County, for chaparral and closed-cone conifer ecosystems for seed germination, reduction of underbrush, soil nutrition, and for water supply. The diversity of each species' response to fire as well as the variety of fire intervals and fire intensities contribute to the overall biodiversity of Kern County. Such diversity, variation, and changes due to wildland fires are important components of the Valley Region, Mountain Region, and Desert Region ecosystems.

The historic reduction in fire activity has produced forests which are denser, generally contain smaller trees, and have a dense understory which all contribute to an increased fuel load. Historic reduction in fire to the more open grassland ecosystems have resulted in increases of non-native species and higher densities of vegetation, also resulting in increased fuel loads. An increase in fuel, coupled with efficient suppression of low and moderate intensity fires, has led to an increase in general fire sensitivity throughout the County, as well as the State.

Typical causes of fires include arson, sparks from brush-clearing and equipment, lightning, improperly maintained campfires, smoking, and children playing with matches. In addition to the

threat to human safety and personal property, fire hazards could impact the environment (including water supply), infrastructure, and local economy. Wildland fires could cause bridges and roads to become impaired, while power and telephone lines could be downed or damaged. The water supply and wildlife habitat could become polluted when rains erode fire-damaged land, carrying soil and sediment into waterways. In addition, in the past, the damage caused by fires has affected tourism, especially since so much of the area's tourist attractions are outdoors and water related.

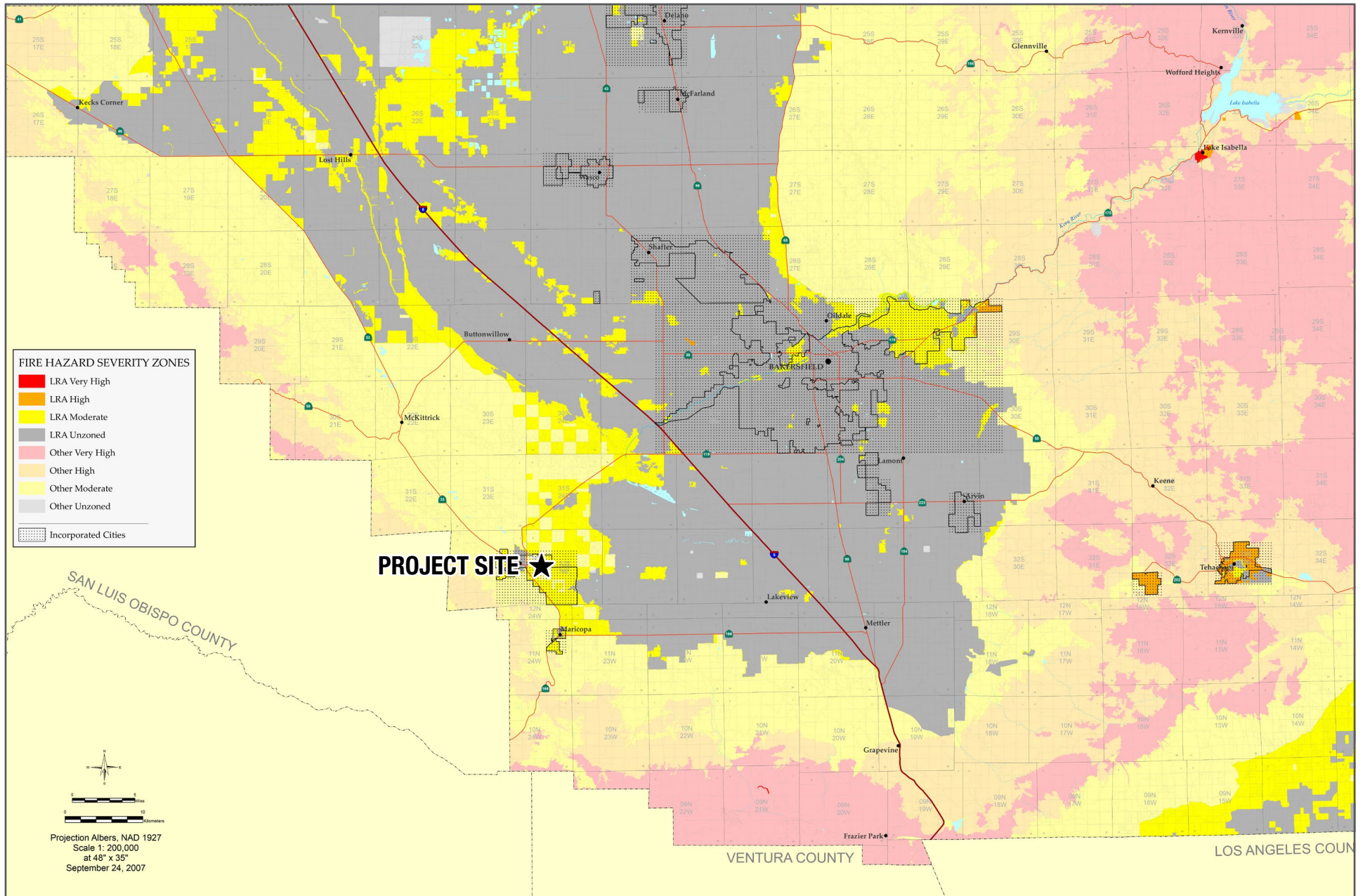
Weather components such as temperature, relative humidity, wind, and lightning also affect the potential for wildfire. High temperatures and low relative humidity dry out the fuels that feed the wildfire creating a situation where fuel will more readily ignite and burn more intensely. Wind is the most treacherous weather factor. The greater a wind, the faster a fire will spread, and the more intense it will be.

CAL FIRE maps FHSZs based on factors such as fuel, slope, and fire weather to identify the degree of fire hazard throughout California (e.g., moderate, high, or very high). While FHSZs do not predict when or where a wildfire will occur, they do identify areas where wildfire hazards could be more severe and are therefore of greater concern. According to the CAL FIRE Kern County FHSZ Maps for Responsibility Areas, the project site is located in a Local Responsibility Area (LRA) (CAL FIRE, 2007a and 2007b). Within the LRA, the project site is designated by the CAL FIRE Kern County FHSZ in LRA Maps as LRA Unzoned (CAL FIRE, 2007b), as shown in **Figure 4.18-1, Fire Hazard Severity Zones for Local Responsibility Areas**. The project site is outside any area identified by CAL FIRE as having very high risk. The nearest Very High Fire Hazard Severity Zone (VHFSZ) is located approximately 20 miles southwest of the project site (CAL FIRE, 2007a and 2007b).

According to the Kern County Wildland Fire Management Plan, the proposed project is located within the "Valley" Fuel Plan Management Area and is designated with an "Agricultural, non-wildland" classification for fire hazard severity zone. Due to the condition of the site and lack of substantial vegetation in areas surrounding the project site, the risk of wildfire in these areas is remote (KCFD, 2009).

Fire History

Fire history information can provide an understanding of fire frequency, fire type, most vulnerable project areas, and significant ignition sources. Fire history represented in this section uses CAL FIRE's data to create a statewide fire perimeters map that shows the history of fires from 1989-2019 (DataBasin, 2020). Based on a review of the map there are no fires in the time period that has burned across the project site or adjacent to the project site. According to the CAL FIRE's California Statewide Fire Map, in 1995 a fire caused by a natural gas blowout burned across Site A (DataBasin, 2020).



SOURCE: Calfire, 2017



Fire Hazard Severity Zones for Local Responsibility Areas

Figure 4.18-1

Vegetation (Fuels)

The project site consists of highly disturbed areas with minimal native vegetation and areas sparsely vegetated. According to the Biological Evaluation prepared for the project, there is an approximately 0.5 acre with ruderal habitat located adjacent to the southwest edge of the project area. This area was previously used for two artificial burrowing owl burrows. The vegetation in this area does not contribute a substantial volume of fuel in the event of a wildfire. The ruderal area is outside of the area proposed for improvements and is dominated by weedy, non-native, and invasive species.

4.18.3 Regulatory Setting

Federal

There are no relevant federal regulations in regard to wildfires.

State

2016 California Fire Code

The 2016 California Fire Code (24 California Code of Regulations [CCR] Part 9) establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The fire code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the fire code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. Chapter 6 (Building Services and Systems) of the fire code focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. Building services and systems that are addressed include emergency and standby power systems, electrical equipment, wiring and hazards, and stationary storage battery systems. Chapter 33 (Fire Safety During Construction and Demolition) of the fire code outlines general fire safety precautions to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment and promote prompt response to fire emergencies. The fire code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire service features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface (WUI) areas.

Senate Bill 1241

Senate Bill 1241 requires the legislative body of a city or county to adopt a comprehensive, long-term general plan that includes various elements, including a safety element for the protection of the community from unreasonable risks associated with among other things, wildland and urban fires. The safety element requires for State responsibility areas (SRA), as defined, and very high fire hazard severity zones (VFHSZ) as defined in California Government Code (CGC) §51177 & 51178 that is not a SRA, to be updated as necessary to address the risk of fire in these areas pursuant to CGC §65302(g)(3).

California Environmental Quality Act

CEQA, PRC §21000, et seq., was amended in 2018 to address numerous legislative changes to CEQA, to clarify certain portions of existing CEQA Guidelines, and to update the CEQA Guidelines to be consistent with recent court decisions.

Impacts of wildfire to development and a development's contribution to the potential creation of wildfire risk at the Wildland-Urban Interface (WUI) are now addressed as a separate "Environmental Factor" to be addressed in the initial study checklist in Appendix G. The Natural Resources Agency expanded the requirements of SB 1241 to also include development projects "near" the SRA and Very High FHSZs.

California Building Standards Codes

The State of California provides minimum standards for building design through the California Building Code (CBC). The CBC is based on the International Building Code (IBC), which is used widely throughout the United States (generally adopted on a state-by-state or district-by-district basis) and has been modified to address particular California concerns. The primary codes with respect to development in or near the WUI include the California Building Code, Chapter 7A "Materials and Construction Methods for Exterior Wildfire Exposure" and the California Fire Code, Chapter 49 "Requirements for Wildland-Urban Interface Fire Areas". These codes require what materials are required to be used for construction for any Building Permit submitted after January 1, 2009 within the geographical areas with FHSZs designated as Very High, High, or Moderate in SRA's and Very High within Local Response Areas (LRA). Maps of these areas were developed in 2007 for California and each county.

Public Resources Code 4291–4299

California PRC Section 4291–4299 et seq. requires that brush, flammable vegetation, or combustible growth within 100 feet of buildings be maintained. Vegetation that is more than 30 feet from the building, less than 18 inches high, and important for soil stability may be maintained, as may single specimens of trees or other vegetation that is maintained so as to manage fuels and not form a means of rapid fire transmission from other nearby vegetation to a structure. Additionally, the PRC outlines infraction fees, certification, and compliance procedures applicable with state and local building standards, including those described in subdivision (b) of Section 51189 of the Government Code.

Local

Construction and operation of the proposed project would be subject to policies and regulations contained within the Kern County General Plan, the Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to wildfire. The policies and implementation measures in the Kern County General Plan and South Kern Industrial Center Specific Plan related to wildfire that are applicable to the project are provided below. The Kern County General Plan and South Kern Industrial Center Specific Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but as stated in

Chapter 2, *Introduction*, all policies, goals, and implementation measures in the Kern County General Plan and South Kern Industrial Center Specific Plan are incorporated by reference.

Kern County General Plan

Chapter 4. Safety Element

Chapter 4.6. Wildland and Urban Fire

Policies

- **Policy 1:** Require discretionary projects to assess impacts on emergency services and facilities.
- **Policy 4:** Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.
- **Policy 6:** All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.

Implementation Measures

- **Implementation Measure A.** Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

Kern County Building and Construction Ordinance (Title 17 of the Ordinance Code of Kern County)

Chapter 17.32 Fire Code

Kern County has adopted, by reference, portions of the California Building Standards Code and the International Fire Code, with modifications and amendments. The purpose of this code is to prescribe the minimum requirements necessary to establish a reasonable level of fire safety to protect life and property from hazards created by fire, explosion, and dangerous conditions.

The Kern County Fire Code defines a hazardous fire area as any land that is covered with grass, grain, brush, or forest and is situated (e.g., in an inaccessible location) so that a fire originating upon such land would present an abnormally difficult job of suppression and would result in great and unusual damage through fire or the resulting erosion.

Chapter 17.34 Wildland-Urban Interface Code

Kern County has adopted, by reference the Urban Wildland Interface Code, published by the International Fire Code Institute, with modifications and amendments. The purpose of this code is to safeguard life and property and maintain public welfare to a reasonable degree by addressing hazards related to wildland fire exposures and fire exposures from adjacent structures, and to prevent structure fires from spreading to wildland fuels.

Kern County Fire Department Wildland Fire Management Plan

The Kern County Fire Department (KCFD) Wildland Fire Management Plan adopted in 2009 assesses the wildland fire situation throughout the State Responsibility Area (SRA) within the

County. The plan includes stakeholder contributions and priorities and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local area. The plan systematically assesses the existing levels of wildland protection services and identifies high-risk and high-value areas, which are potential locations for costly and damaging wildfires. The plan also ranks the areas in terms of priority needs and prescribes what can be done to reduce future costs and losses. None of the project area is located an area defined as medium, high, or very high FHSZ (KCFD 2009).

Kern County Fire Department Unit Strategic Fire Plan

The KCFD Unit Strategic Fire Plan, adopted in March 2018, is the most current document that assesses the wildland fire situation throughout the SRA within the County. Similar to other plans, this document includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local area. The plan provides for a comprehensive analysis of fire hazards, assets at risk, and levels of service to systematically assess the existing levels of wildland protection services and identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires. Additionally, the plan provides an annual report of unit accomplishments, which, in 2017, included completion of a number of fuel reduction projects; the hosting of three wildfire safety expos in battalions 1, 5, and 7; and the award of three SRA fuel reduction grants for a total of \$500,000. The plan gives an overview of KCFD Battalions and ranks these areas in terms of priority needs as well as identifies the areas of SRA. According to the Plan, 69% of Kern County areas are within an SRA. The County is broken up into six different fuel management areas: Tehachapi, Western Kern, Northern Kern, Mount Pinos Communities, Kern River Valley, and Valley. The project site is located within Battalion 2 (Western Kern) (KCFD 2009).

4.18.4 Impacts and Mitigation Measures

Methodology

The proposed project's potential impacts associated with wildfires have been evaluated using a variety of resources, including CAL FIRE maps showing FHSZs, FRAP, and fire history; project location maps; and project characteristics. Wildfire impacts are considered on the basis of: (1) off-site wildland fires that could impact the proposed project; and (2) on-site generated combustion that could affect surrounding areas. Using the aforementioned resources and professional judgment, impacts were analyzed according to California Environmental Quality Act (CEQA) significance criteria described below.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the State CEQA Guidelines, to determine if a project could potentially have a significant impact with respect to wildfires.

A project would have a significant impact with respect to wildfires if it would be located in or near SRAs or lands classified as very high FHSZs, and if the project would:

- 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; or
- 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.

Project Impacts and Mitigation Measures

Impact 4.18-1: The Project Would Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan.

The project site area is not classified as being within a high fire hazard severity zone and the project is not anticipated to physically impede the existing emergency response plans, emergency vehicle access, or personnel access to the site. The project site is located in sparsely populated area that is used for some solar energy production but is dominated by agricultural land. South Lake Road would be used by emergency vehicles to access properties in surrounding areas and to access the project site via Santiago Road that provides direct access to the project site. The project site is located approximately 0.25 miles south of Lake Road and any activity on the site would not affect emergency responses or evacuations.

All construction managers and personnel working at the project site are trained in fire prevention and emergency response in compliance with applicable Fire Code and Building Code requirements. Fire suppression equipment specific to operations are maintained on site. Additionally, future project construction would comply with applicable codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. The proposed project would not interfere with the operation of any roadway, facility, or area that would be used as part of an emergency response plan or emergency evacuation plan. Thus, impacts would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Impact 4.18-2: The Project Would 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.

The proposed project site is located adjacent to vacant land, agricultural uses, a solar installation, and a petroleum operation to the north. The project site is flat, and as discussed above, does not contain

any wildland vegetation. In addition, none of the surrounding areas have any wildland vegetation, steep slopes, or would be prone to wildfire that could be exacerbated by prevailing winds. These facts make the potential risk of wildfire on the project site remote and impacts from the uncontrolled spread of wildfire would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

Impact 4.18-3: The Project Would 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.

As discussed above, neither the project site nor the surrounding areas have vegetation patterns or types, or landform including steep slopes that would be susceptible to wildfire. The project site is located in an area designated as agricultural, non-wildland and the overall risk of wildfire is remote. The composting facility has a fire safety plan which would be amended as needed to include the new equipment proposed for installation as well as a discussion of any requirements related to fire suppression for the increased volume of materials and size of the composting piles. The composting project also would follow all applicable requirements set forth by the respective agencies related to fire safety including Kern County Fire Department, LEA, and Cal Recycle. Thus, while the proposed project does include minor onsite related improvements that would be needed to power and/or fuel new equipment and machinery necessary to receive and process new expanded feedstocks, and because the project site is not located within or adjacent to any areas with a substantial risk of wildfire, none of these improvements would exacerbate the risk of wildfire or result in impacts to the environment, either temporary or ongoing, in this regard. Impacts would not occur.

Mitigation Measures

No mitigation measures are required.

Level of Significance

No impacts would occur.

Impact 4.18-4: The Project Would 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.

As described above the wildfire risk to the project site and surrounding areas is remote. The project site is relatively flat as are the surrounding areas. There are no on-site or adjacent streams, or hills at risk of experiencing landslides. Impacts in this regard would not occur.

Mitigation Measures

No mitigation would be required.

Level of Significance

No impacts would occur.

Cumulative Setting, Impacts and Mitigation Measures

Impacts of the proposed project would be cumulatively considerable if they would have the potential to combine with similar impacts of other past, present, or reasonably foreseeable projects. As described in **Chapter 3, Project Description** of this Draft EIR, there are other commercial and residential projects in the region that are reasonably foreseeable. There are no other landfills, composting, or recycling projects anticipated in close proximity to the proposed project.

Incremental impacts of the proposed new feedstocks into the existing composting facility would not contribute to a cumulative effect on wildland fire risk in combination with other past, present, or reasonably foreseeable future actions. For purposes of this analysis, the geographic scope of the cumulative effects analysis for wildfire impacts is considered the immediate and surrounding areas of approximately five miles. This geographic scope was selected because the land within this area possesses relatively similar uses, including agricultural development, farming activities, rural roadways, scattered rural residences, and associated uses. The surrounding areas are generally classified agricultural, non-wildland and the overall risk for these areas as well as the project site to experience a wildfire is remote. No lands in this area are classified as being within Moderate, High, or Very High hazard severity zone.

Regarding adopted emergency response plans, all identified projects would be required to provide adequate emergency access, fire protection, and submit emergency evacuation plans in accordance with Kern County Fire Code and Building Code requirements and prior to the issuance of a building permit. Regarding cumulative impacts related to exposure of occupants to pollutant concentrations from a wildfire, the composting facility and related projects are not within SRAs and/or High Fire Hazard Severity Zones. All related projects would be required to implement design features in accordance with the Fire Code to reduce wildfire risk and exposure of occupants to pollutant concentrations from a wildfire.

Related projects may require associated infrastructure such as roads, fuel breaks, water sources, or power lines. Considering the existing land uses, it is not anticipated that this would exacerbate fire risk or that such project elements would result in a cumulative temporary or ongoing impacts to the environment because no impacts related to the proposed project would occur in this regard. In addition, all projects would be reviewed by Kern County, as Lead Agency, for land use and zoning consistency and compliance with applicable requirements and analyzed for environmental impacts related to wildfire risk. The placement of infrastructure would adhere to all fire codes to minimize the potential overall fire as well as wildfire risk. In addition, because the project site and surrounding areas do not contain steep slopes, no cumulative impacts related to the exposure of people or structures to risks from downslope or downstream flooding or landslides as a result of

post-fire instability would occur. Thus, project related cumulative impacts associated with wildfire would be less than significant.

Mitigation Measures

No mitigation would be required.

Level of Significance

Impacts would be less than significant.

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Chapter 5

Consequences of Project Implementation

5.1 Environmental Effects Found to Be Less-than-Significant

Section 15128 of the CEQA Guidelines requires that an EIR “contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR.”

Kern County has engaged the public in the scoping of the environmental document. Comments received during scoping have been considered in the process of identifying issue areas that should receive attention in the EIR. The EIR’s contents were established based on a Notice of Preparation/ Initial Study (NOP/IS) that was prepared in accordance with the State CEQA Guidelines and in consideration of public and agency input received during the scoping process (see Appendix A of this EIR).

Issues that were found to have no impact or less-than-significant impacts do not need to be addressed further in this EIR. Based on the findings of the NOP/IS and the results of scoping, it was determined that the project would have no impact with regard to Forestry Resources, Mineral Resources, Population and Housing, and Recreation. As such, this EIR does not contain a section on these environmental topics.

For all other resource areas, this EIR contains a comprehensive analysis of potential environmental impacts.

After further study and environmental review, as provided in this EIR, it was determined that project level impacts in the following areas would be less than significant or could be reduced to less-than-significant levels with mitigation measures; however, these resource areas are evaluated in this EIR for their potential significance:

- Aesthetics
- Agriculture
- 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
- Public Services
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

5.2 Significant Environmental Effects that Cannot Be Avoided

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less than significant levels. Potential environmental effects of the project and proposed mitigation measures are discussed in detail in Chapter 4 of this EIR.

After further study and environmental review, as provided in this EIR, it was determined that project-level and cumulative impacts in the following areas would be significant and unavoidable for the project, even with the incorporation of reasonable mitigation measures, which would attempt to reduce impacts to the greatest extent feasible.

Impacts in the following areas would be significant and unavoidable, even with the incorporation of feasible mitigation measures that attempt to reduce impacts to the extent feasible:

- **Air Quality:** Project-level construction and operational emissions are significant even with mitigation. Criteria emissions are considered significant and unavoidable because the region is in nonattainment for designated pollutants. Additionally, because of scientific uncertainty regarding the relationship between NO_x and VOC reductions and projects that may occur within the SJVAB that are outside the discretionary approval authority of the County, projects in the area may not fully offset their emissions with project specific mitigation. As a result, the project also results in a cumulatively considerable air quality impact.

5.3 Irreversible Impacts

Section 15126.2(c) of the CEQA Guidelines defines an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of the project. Irreversible impacts can also result from damage caused by environmental accidents associated with a project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified.

Installation of new equipment and machinery would require the commitment of nonrenewable resources during installation and project operations. More specifically, during project operations, oil, gas, and other fossil fuels and nonrenewable resources would be consumed, primarily in the form of transportation fuel needed to transport composting materials and for project employees' trips to and from the site; however, these fuels are being consumed today through the existing site operations and the approval of this new equipment and machinery will not result in an increase in tonnage received at the facility. None the less, an irreversible commitment of nonrenewable resources would occur as a result of long-term project operations. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the Kern County General Plan and South Kern Industrial Center Specific Plan and as they would be consistent with existing operations, as a matter of public policy, those commitments have been determined to be acceptable. Compliance with the Kern County General Plan and South Kern Industrial Center Specific Plan ensure that any irreversible environmental changes associated with those commitments will be minimized.

5.4 Growth Inducement

The Kern County General Plan recognizes that certain forms of growth are beneficial, both economically and socially. Section 15126.2(d) of the CEQA Guidelines provides the following guidance on growth-inducing impacts:

A project is identified as growth-inducing if it “would foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.

Growth inducement can be a result of new development that requires an increase in employment levels, removes barriers to development, or provides resources that lead to secondary growth. With respect to employment, the proposed project would not induce substantial growth. It is anticipated that the workforce needed to install new machinery and equipment would commute to the sites each day from local communities. It is anticipated that the majority would likely come from the existing labor pool as construction workers and travel to and from site to site as needed. Continued operation of the Project and implementation of the new equipment would require a total of 60 permanent staff employees for ongoing facility management including truck drivers delivering materials to and from the site.

Additionally, the proposed project would expand a previously approved and existing composting facility and would not induce new growth but instead respond to increased market demand. Kern County Planning and Natural Resources Department documents already permit and anticipate a certain level of growth in the area of the project and in the State as a whole, along with attendant growth in demand. Therefore, any link between the project and unanticipated and unplanned growth in Kern County would be speculative.

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Chapter 6

Alternatives

6.1 Introduction

CEQA requires that an EIR describe a range of reasonable alternatives to the project or to the location of the project that could feasibly avoid or lessen any significant environmental impacts of the project while attaining most of the project's basic objectives. An EIR also must compare and evaluate the environmental effects and comparative merits of the alternatives. This chapter describes alternatives considered but eliminated from further consideration (including the reasons for elimination) and compares the environmental impacts of several alternatives retained with those of the project.

The following are key provisions of the CEQA Guidelines (Section 15126.6):

The discussion of alternatives shall focus on alternatives to the project or its site that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly;

The No-Project Alternative shall be evaluated, along with its impacts. The no-project analysis shall discuss the existing conditions at the time the notice of preparation was published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services;

The range of alternatives required in an EIR is governed by a "rule of reason." Therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project;

For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR; and

An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives (as described in Section 15126.6(f)(1) of the CEQA Guidelines) are environmental impacts, site suitability, economic viability, social and political acceptability, technological capacity, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the project proponent could reasonably acquire, control, or otherwise have access to an alternative site. If an alternative has effects that cannot be reasonably identified, if its implementation is remote or speculative, and if it would not achieve the basic project objectives, it need not be considered in the EIR.

6.2 Significant Impacts of the Project after Mitigation

Implementation of the proposed project would result in significant and unavoidable project-level impacts after mitigation to air quality. With the mitigation measures described in **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures**, of this EIR, impacts in all issue areas but Air Quality would be reduced to less than significant. Therefore, per the state CEQA Guidelines, this section discusses alternatives that are capable of avoiding or substantially lessening effects on these resources.

6.3 Project Objectives

CEQA requires a statement of project objectives (Section 15124 of the CEQA Guidelines). The proposed project would modify the existing Conditional Use Permit of the existing Synagro compost facility, in response to recent changes in State of California Legislation that requires diversion of 50% of all organics from landfills by 2020 and 75% by 2025. The following are the objectives of the proposed project:

- Assist in obtaining the State's targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025 per SB 1383;
- Continue to operate a state-of-the-art regional composting facility to meet the organic waste diversion requirements enacted by recent California legislation (AB 32, AB 1826, SB 1383, etc.) to reduce volatile organic compound and greenhouse gas emissions through the diversion of organic material that would otherwise be disposed of in a landfill;
- Accommodate the growing market demand for "Organic" compost by targeting agricultural material, food material, vegetative food material, manure, and other compostable, organic, and recyclable materials to produce high quality compost for the agricultural community and customers;
- Utilize existing infrastructure for composting operations to preserve prime farmland, minimize environmental impact, and provide continued economic benefits to Kern County through employment of local residents including compliance with SB 1383 recycling goals;
- Provide ongoing composting activities in compliance with San Joaquin Valley Air Pollution Control District and Regional Water Quality Control Board rules and regulations; and
- Manufacture high quality compost for use in sustainable agriculture practices to create water saving opportunities and enhancement of agricultural soils.

6.4 Overview of Alternatives to the Project

The purpose of the alternatives analysis is to analyze alternatives that could reduce the significant impacts of a project. Based on the significant environmental impacts of the proposed project, the aforementioned objectives established for the proposed project and the feasibility of the alternatives considered, a range of alternatives is analyzed below and summarized in **Table 6-1, Summary of Development Alternatives**. The Environmentally Superior Alternative, as required by CEQA, is described in **Section 6.8, Environmentally Superior Alternative**, below.

Alternative 1: No Project Alternative

The CEQA Guidelines require EIRs to include a No Project Alternative for the purpose of allowing decision makers to compare the effects of approving the proposed project versus a No Project Alternative. Accordingly, Alternative 1, the No Project Alternative, assumes that the project site would continue to operate as a compost facility as it has since 2006, and project operations would continue with no change in operations. The proposed addition or modification of the following components would not occur: (1) types and sources of food waste; (2) additional feedstocks; (3) install new equipment; (4) increase pile heights from 15 to 20 feet; (5) increase storage time of finished compost product from 7 days to 180 days. The No Project Alternative would not require a modification of the existing conditional use permit (CUP) No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) to include changes to current operations. Under the No Project Alternative, there would be no project modifications, and the existing project site would continue to operate consistent with existing operations.

Alternative 2: Locally Sourced Feedstocks Alternative

This alternative would limit the source of new feedstocks at the existing compost facility to within Kern County. This alternative would reduce the number and length of trips to the facility to deliver new feed stocks thereby reducing ROG and NOx emissions.

Alternative 3: Limited New Feedstocks Alternative

This alternative would limit new feedstocks at the existing compost facility to pre-consumer food waste from large scale industrial or commercial users such as food processors, packing houses, and grocery stores. Food waste from these users would have limited contamination and packaging material. Food waste from institutional facilities such as schools, restaurants, and prisons would not be accepted at the facility due to the high amount of contamination in the food waste.

This alternative would result in a slight decrease in truck trips, using only large volume trucks not smaller vehicles. Fewer truck trips would also result in an incremental reduction in ROG and NOx emissions. The acceptance of only pre-consumer food waste would decrease the sorting and processing to remove plastics and other non-compostable materials that require disposal at County landfills.

Table 6-1: Summary of Development Alternatives

Alternative	Description	Basis for Selection and Summary of Analysis
Proposed Project	<ul style="list-style-type: none"> • Assist in obtaining the State’s targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025 per SB 1383; • Continue to operate a state-of the art regional composting facility to meet the organic waste diversion requirements enacted by recent California legislation (AB 32, AB 1826, SB 1383, etc.) to reduce volatile organic compound and greenhouse gas emissions through the diversion of organic material that would otherwise be disposed of in a landfill; • Accommodate the growing market demand for “Organic” compost by targeting agricultural material, food material, vegetative food material, manure, and other compostable, organic, and recyclable materials to produce high quality compost for the agricultural community and customers; • Utilize existing infrastructure for composting operations to preserve prime farmland, minimize environmental impact, and provide continued economic benefits to Kern County through employment of local residents including compliance with SB 1383 recycling goals; • Provide ongoing composting activities in compliance with San Joaquin Valley Air Pollution Control District and Regional Water Quality Control Board rules and regulations; and • Manufacture high quality compost for use in sustainable agriculture practices to create water saving opportunities and enhancement of agricultural soils. 	<ul style="list-style-type: none"> • N/A
No Project Alternative	<ul style="list-style-type: none"> • Increase the types of composting feedstocks accepted at the facility, including digestate, in response to Assembly Bill 1826 and Senate Bill 1383 requirements; • Install new equipment to be used as part of pre-processing and post-composting operations, including, but not limited to grinders, electrical screens, etc. to improve composting efficiency and capability; • Increase all pile heights from 16 feet to 20 feet including, but not limited to, receiving, mixing, composting, curing, screening, and finished product; and • Increase storage time of finished compost product from 7 days to 180 days to accommodate seasonal markets and be consistent with regulatory permitting requirements. 	<ul style="list-style-type: none"> • Required by CEQA. • Avoids need for GPAs, ZCCs, CUPs, and vacations.
Locally Sourced Feedstock Alternative	<ul style="list-style-type: none"> • Limit the source of new feedstocks to only those generated from within Kern County. 	<ul style="list-style-type: none"> • Reduce the number and length of vehicle/truck trips.

Table 6-1: Summary of Development Alternatives

Alternative	Description	Basis for Selection and Summary of Analysis
Limited New Feedstock Alternative	<ul style="list-style-type: none"> • Limit new feedstocks to pre-consumer food waste from large scale industrial or commercial users such as food processors, packing houses, and grocery stores. • Do not accept food waste from institutional facilities such as schools, restaurants, and prisons. • This alternative would result in a slight decrease in truck trips, using only large volume trucks not smaller vehicles; • Reduce the need for on-site processing efforts. 	<ul style="list-style-type: none"> • Reduce ROG and NOx emissions. • These wastes have limited packaging material and contamination. • These sources have higher amounts of contaminants. • Slightly reduce truck trips and incremental reduction in ROG and NOx emissions. • Decrease on-site processing to remove non-compostable materials. • Reduce demand for off-site disposal of non-compostable materials

6.5 Alternatives Considered and Rejected

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially lessen any significant environmental effects (CEQA Guidelines, Section 15126.6[c]). Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered (CEQA Guidelines, Section 15126[f][2]). Kern County considered several alternatives to reduce impacts on, air quality, greenhouse gas emissions, noise, or transportation and traffic. Per CEQA, the lead agency may make an initial determination as to which alternatives are feasible and warrant further consideration, and which are infeasible. The following alternatives were initially considered but were eliminated from further consideration in this EIR because they would not eliminate or substantially reduce any significant and unavoidable project or cumulative impacts. Additionally, alternatives screened from detailed consideration would not meet project objectives and/or were infeasible.

- Reduced Project Alternative
- Alternative Site Alternative

Reduced Project Alternative

A Reduced Project Alternative would reduce the proposed modifications to the approved CUP boundary to create a smaller overall development footprint compared to the proposed project. However, given the limited area for project operations, this alternative was determined to be infeasible in relation to meeting the majority of project objectives.

Alternative Site Alternative

This alternative would involve the development of the proposed project on another site located within Kern County. Although undetermined at this time, the alternative project site would likely remain in the San Joaquin Valley region of the County, similar to the proposed project. CEQA Guidelines 15126.6(f)(2)(a) states that the key and initial step in considering an alternative site Alternative is whether “any of the significant effects of the project would be avoided or substantially lessened” in relocating the project, while remaining consistent with the same basic objectives of the proposed project. The availability of alternative sites is constrained by the agricultural use of the surrounding area. While other sites with similar size, configuration, and use history may exist in San Joaquin Valley, use of these sites would mean displacement of existing agricultural uses, which would create greater environmental impacts. In addition, alternative sites for the project are not considered to be “potentially feasible,” as there are no suitable sites within the control of the project Applicant that would reduce project impacts. There are no alternative sites within the Applicant’s control where project development would result in fewer project impacts. Given the size of the proposed project and the project objectives, this alternative was eliminated because it would not avoid or substantially reduce the significant environmental effects of the proposed project.

6.6 Analysis Format

In accordance with CEQA Guidelines Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the project. Furthermore, each alternative is evaluated to determine whether the project objectives identified in **Chapter 3, Project Description**, of this EIR would be mostly attained by the alternative. The project’s impacts that form the basis of comparison in the alternatives analysis are those impacts which represent a conservative assessment of project impacts.

The following alternatives have been determined to represent a reasonable range of alternatives which have the potential to feasibly attain most of the basic objectives of the project, but which may avoid or substantially lessen any of the significant impacts of the proposed project. The “Environmentally Superior” Alternative, as required by CEQA is described in **Section 6.8, Environmentally Superior Alternative**. The alternatives analyzed in detail below:

- Alternative 1 No Project Alternative
- Alternative 2: Locally Sourced Feedstock Alternative
- Alternative 3: Limited New Feedstocks Alternative

The evaluation of each of the alternatives follows the process described below:

- a) The net environmental impacts of the alternative after implementation of reasonable mitigation measures are determined for each environmental issue area analyzed in this EIR.
- b) Post-mitigation significant and less than significant environmental impacts of the alternative and the project are compared for each environmental issue area as follows:
 - Less: Where the impact of the alternative after feasible mitigation would be clearly less adverse than the impact of the project, the comparative impact is said to be “less.”
 - Greater: Where the impact of the alternative after feasible mitigation would be clearly more adverse than the impact of the project, the comparative impact is said to be “greater.”
 - Similar: Where the impacts of the alternative after feasible mitigation and the project would be roughly equivalent, the comparative impact is said to be “similar.”
- c) The comparative analysis of the impacts is followed by a general discussion of whether the underlying purpose for the project, as well as the project’s basic objectives would be substantially attained by the alternative.

Table 6-2, *Comparison of Alternatives*, provides a summary and side-by-side comparison of the proposed project’s impacts with the impacts of each of the alternatives analyzed. Please note that in **Table 6-1, *Summary of Development Alternatives***, the references to “less, similar, or greater,” refer to the impact of the alternative compared to the proposed project, and the impacts “no impact, less than significant, or significant and unavoidable,” in the parentheses refer to the significant impact of the specific alternative.

Table 6-2: Comparison of Alternatives

Environmental Resource	Proposed Project	Alternative 1: No Project Alternative	Alternative 2: Locally Sourced Feedstock Alternative	Alternative 3: Limited New Feedstocks Alternative
Aesthetics	Less than significant	Less (remain less than significant)	Similar (remain less than significant)	Similar (remain less than significant)
Agricultural Resources	Less than significant	Less (reduced to no impact)	Similar (remain less than significant)	Similar (remain no impact)
Air Quality	Significant and Unavoidable (cumulative PM _{2.5})	Less (reduced to no impact)	Less (remain significant and unavoidable for cumulative PM _{2.5})	Less (remain significant and unavoidable for cumulative PM _{2.5})
Biological Resources	Less than significant with mitigation	Less (reduced to no impact)	Similar (remain less than significant)	Similar (remain less than significant)
Cultural Resources	Less than significant	Less (reduced to no impact)	Similar (remain less than significant)	Similar (remain less than significant)
Energy	Less than significant	Similar (remain less than significant)	Less (remain less than significant)	Less (remain less than significant)
Geology and Soils	Less than significant	Less (reduced to no impact)	Similar (remain less than significant)	Similar (remain less than significant)
Greenhouse Gas Emissions	Less than significant	Greater (remain less than significant)	Similar (remain less than significant)	Less (remain less than significant)
Hazards and Hazardous Materials	Less than significant with mitigation	Similar (remain less than significant)	Similar (remain less than significant)	Similar (remain less than significant)
Hydrology and Water Quality	Less than significant with mitigation	Similar (remain less than significant)	Similar (remain less than significant)	Similar (remain less than significant)
Land Use and Planning	Less than significant	Similar (remain less than significant)	Similar (remain less than significant)	Similar (remain less than significant)
Mineral Resources	Less than significant	Less than significant	Similar (remain less than significant)	Similar (remain less than significant)
Noise	Less than significant	Less (reduced to no impact)	Less (remain less than significant)	Similar (remain less than significant)
Public Services	Less than significant	Less (reduced to no impact)	Similar (remain less than significant)	Similar (remain less than significant)

Table 6-2: Comparison of Alternatives

Environmental Resource	Proposed Project	Alternative 1: No Project Alternative	Alternative 2: Locally Sourced Feedstock Alternative	Alternative 3: Limited New Feedstocks Alternative
Traffic and Transportation	Less than significant	Less (remain less than significant)	Less (remain less than significant)	Less (remain less than significant)
Tribal Cultural Resources	Less than significant	Similar (reduced to no impact)	Similar (remain less than significant)	Similar (remain less than significant)
Utilities and Service Systems	Less than significant	Similar (remain less than significant)	Similar (remain less than significant)	Similar (remain less than significant)
Wildfire	Less than Significant	Similar (remain less than significant)	Similar (remain less than significant)	Similar (remain less than significant)
Meet Project Objectives?	Yes	No	Some	Some
Reduce Significant and Unavoidable Impacts?	No -A Significant and Unavoidable cumulative Air Quality Impact.	Less (remain less than significant or reduced to no impact)	Similar (overall remain less than significant, or significant unavoidable PM _{2.5})	Similar (overall remain less than significant)

6.7 Impact Analysis

Alternative 1: No Project Alternative

Environmental Impact Analysis

Aesthetics

Under the No Project Alternative, the project site would not be altered. Therefore, views across the project site would remain the same as the existing conditions. The maximum pile heights would remain at 15 feet and would not be increased to 20 feet. Potential impacts were determined to be less than significant for the proposed project and would be similar under the No Project Alternative.

Agriculture

Under the No Project Alternative, the project site would maintain its existing land uses, developed with the existing compost facility, and no physical changes would be made to the project site. Similar to the proposed project, the No Project Alternative would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses as there are no agricultural uses currently on the project site. The No Project Alternative would not conflict with the existing

zoning, and no CUP modification would be required. No potential impacts to forestland, farmland or open space contracts would occur. Therefore, there would be no impact and the No Project Alternative would result in less agricultural resource impacts compared to the proposed project.

Air Quality

Under the No Project Alternative, the project site would maintain its existing land uses, developed with the existing compost facility and no construction activities would occur. Thus, no impacts to air quality related to construction would occur. No exceedance of the SJVAPCD's thresholds for PM_{2.5} would occur, nor would the project contribute to a significant cumulative net increase of criteria pollutant in the projects' region. Therefore, no impacts to air quality related to construction would occur, nor would the project contribute to a significant and unavoidable cumulative net increase of criteria pollutant in the projects' region. Significant and unavoidable impacts on air quality would be avoided under this alternative.

Biological Resources

Under the No Project Alternative, the project site would maintain its existing use, developed with the existing compost facility, and no construction or expanded operational activities would occur. No impacts to biological resources would occur. The project site would remain in its current state and would not contribute to a cumulative loss of foraging and nesting habitat for nesting birds, burrowing owl, and San Joaquin kit fox that may utilize habitat on the project site. Therefore, there would be no impact and the No Project Alternative would result in less biological resources impacts compared to the proposed project.

Cultural Resources

Under the No Project Alternative, the project site would maintain its existing use, developed with the existing compost facility, and no ground disturbing activities would occur. Therefore, no historical, cultural or archeological would be potentially impacted. There would be no impact and the No Project Alternative would result in similar cultural resource impacts compared to the proposed project.

Energy Resources

The No Project Alternative would not result in alterations to the existing use within the project site. Therefore, no significant increases in energy consumption would occur, and no new impacts to energy resources would occur under this Alternative. Impacts would remain less than significant under this alternative as there would be no wasteful or inefficient expenditure of energy resources.

Geology and Soils

Under the No Project Alternative, the project site would maintain its existing use, developed with the existing compost facility, and no construction or earth-moving activities would occur. Therefore, this alternative would not increase risks related to exposure of people or structures to geologic or seismic hazards. As such, similar to the proposed project, there would be no impacts and the No Project

Alternative would result in similar impacts related to geology and soils compared to the proposed project.

Greenhouse Gas Emissions

Under the No Project Alternative, the project site would maintain its existing use, developed with the existing compost facility, and no construction activities would occur. Therefore, construction emissions that contribute to GHGs would be eliminated. However, the project would not be able to receive new types of feedstocks which could end up in County landfills. Food waste processed through anaerobic decomposition in landfills would result in increased GHG emissions as a result of that process. Therefore, GHG emission impacts would be greater than those of the proposed project.

Hazards and Hazardous Materials

Under the No Project Alternative, the project site would maintain its existing use, developed with the existing compost facility, and no construction activities would occur. No new hazardous materials would be introduced to the project site and no new impacts from hazards or hazardous materials would occur. Therefore, impacts related to hazards or hazardous materials would be similar to those of the project.

Hydrology and Water Quality

Under the No Project Alternative, the project site would maintain its existing use, developed with the existing compost facility, and no construction drainage and water quality impacts would not occur. Thus, there would be no new impacts to hydrology and water quality and the No Project Alternative would result in incrementally fewer impacts related to hydrology and water quality compared to the proposed project.

Land Use and Planning

The No Project Alternative would not implement any new development at the project site. Similar to the proposed project the current use on the site would be consistent with the zoning and general plan land use classifications. Thus, there would be no impact and impacts would be less-than-significant, the same as those identified for the proposed project.

Mineral Resources

The No Project Alternative would not implement any new development at the project site. Similar to the proposed project the current use on the site would be consistent with the zoning and general plan land use classifications. Thus, there would be no impact to mineral resources on the site or result in reduced access in adjacent or nearby areas. This is the same impacts as identified for the proposed project

Noise

Under the No Project Alternative, the project site would maintain its existing use, developed with the existing compost facility, and no construction activities would occur and no additional noise generating uses would be implemented. Thus, there would be no impact and impacts would be reduced compared to the less-than-significant impacts identified for the proposed project.

Public Services

Under the No Project Alternative, the project site would maintain its existing use, developed with the existing compost facility, and no new demand for fire or police protection services would occur. Thus, there would be no impact and impacts would be incrementally reduced compared to the less than significant impacts identified for the proposed project.

Transportation and Traffic

Under the No Project Alternative, the project site would maintain its existing land use, developed with the existing compost facility, and this alternative would not introduce construction or additional operational-related trips. Under this alternative, existing traffic patterns and volumes on nearby roadways would remain unchanged. Therefore, impacts related to transportation and traffic from the No Project Alternative would be further reduced to the less-than-significant as compared to the impacts identified for the proposed project.

Tribal Cultural Resources

Under the No Project Alternative, the project site would maintain its existing use, developed with the existing compost facility, and no ground disturbing activities would occur. Therefore, no tribal cultural resources would be potentially impacted. There would be no impact and the No Project Alternative would result in similar tribal cultural resource impacts compared to the proposed project.

Utilities and Service Systems

Under the No Project Alternative, the project site would maintain its existing use, developed with the existing compost facility, and there would be no new demand for utilities and service systems that do not currently exist at the site. Potential impacts at County landfills may increase if new sources of feed stock cannot utilize existing composting facilities and have to dispose of food waste at County landfills. As such, impacts associated with the No Project Alternative would have incrementally greater impacts than the proposed project. Overall, however, project impacts for the No Project Alternative, would remain less-than-significant and the same in this regard as identified for the proposed project.

Wildfire

Under the No Project Alternative, the project site would maintain its existing use, developed with the existing compost facility, and no expansion of uses would occur. Similar to the proposed project there would be no impacts as a result of increased exposure to wildfire nor would this alternative exacerbate

the potential for wildfire impacts to occur. Therefore, there would be no impact and the No Project Alternative also would have less-than-significant impacts compared to the proposed project.

Comparison of Impacts

The No Project Alternative would result in impacts that would be less than or similar to the proposed project, with the exception of GHG emissions and Utilities and Service Systems which would be incrementally greater.

Relationship to Project Objectives

The No Project Alternative would not achieve any of the project objectives listed above in **Section 6.2**, such as assisting in obtaining the State’s targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste or accommodating the growing market demand for “Organic” compost by targeting agricultural material, food material, vegetative food material, manure, and other compostable, organic, and recyclable materials. Although this alternative would create less environmental impact overall, the goals and objectives that shape the project would not be realized under this alternative.

Alternative 2: Locally Sourced Feedstocks Alternative

Environmental Impact Analysis

Aesthetics

The Locally Sourced Feedstocks Alternative would maintain the same facility modifications outlined in **Chapter 3, Project Description**, but restricts the existing annual 670,000-ton capacity of the facility to sources from within Kern County. The Locally Sourced Feedstocks Alternative would limit the supply of new feedstocks at the existing compost facility to pre-consumer food waste from large scale industrial or commercial users such as food processors, packing houses, and grocery stores. Under this alternative, the land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. Similar to the proposed project, the Locally Sourced Feedstocks Alternative would increase the maximum pile heights from 15 feet to 20 feet. Similar to the proposed project, this alternative would not adversely impact a scenic vista or scenic resources along a designated scenic highway. The proposed modifications to the existing composting facility would not result in impacts on the visual character of the surrounding area or generate new sources of substantial light or glare. Potential impacts were determined to be less than significant for the proposed project and would be similar under the No Project Alternative.

Agricultural Resources

The Locally Sourced Feedstocks Alternative would limit the supply of new feedstocks at the existing compost facility to pre-consumer food waste from large scale industrial or commercial users such as food processors, packing houses, and grocery stores. Under this alternative, the land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. The Locally Sourced Feedstocks Alternative would maintain the same facility modifications outlined

in **Chapter 3, Project Description**, but restricts the existing annual 670,000-ton capacity of the facility to sources from within Kern County. Similar to the proposed project, the Locally Sourced Feedstocks Alternative would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses as there are no agricultural uses currently on the project site. In addition, similar to the proposed project, implementation of this Alternative would not result in the cancellation of an existing Williamson Act contract or contribute to a loss of forest land in Kern County. Therefore, there would be no impact and the Locally Sourced Feedstocks Alternative would result in similar agricultural resource impacts as the proposed project.

Air Quality

Under the Locally Sourced Feedstocks Alternative, the source of new feedstocks at the existing compost facility would be limited to sources located within Kern County. Given that the area of development would not change compared to the proposed project, the extent of this alternative's construction-related impacts to air quality would remain the same as the proposed project. However, during operation the source of the feedstock would be limited to facilities that are located within Kern County; reducing the distance from which feedstock could be transferred to the composting facility. This alternative would reduce the number and length of trips to the facility to deliver new feed stocks. Subsequently, ROG and NO_x emissions would be reduced for the Locally Sourced Feedstocks Alternative compared to the proposed project. Similar to the proposed project, this alternative would be required to implement Mitigation Measure **MM 4.3-1**. As with the proposed project, air quality impacts under this alternative would be significant and unavoidable at both the project level (for long term exposure of PM_{2.5}) and at a cumulative level due to the valley's non-attainment status for PM_{2.5}. Therefore, air quality impacts under this alternative would be incrementally less than the proposed project but still significant and unavoidable.

Biological Resources

The Locally Sourced Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility to within Kern County. Under this alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. As discussed in **Section 4.4, Biological Resources**, with implementation of Mitigation Measures **MM 4.4-1** through **MM 4.4-11**, full project build-out would result in less than significant impacts on biological resources. The proposed mitigation provides comprehensive strategies to protect sensitive biological resources and species. The mitigation requires subsequent construction to be monitored by a qualified biologist, environmental awareness training for future workers, avoidance and protective measures for sensitive species including but not limited to San Joaquin Kit Fox, borrowing owl, Swainson's hawk, and would include a trash abatement program. Since this alternative maintains the same facility modifications, but with limits on the feedstock sources, this alternative would result in less-than-significant impacts to biological resources with the same mitigation incorporated. Impacts would be similar to those identified for the proposed project and remain less than significant.

Cultural Resources

Similar to the proposed project, Locally Sourced Feedstocks Alternative would include a request for land use entitlements necessary to facilitate the updated and continued use of a compost facility. Thus,

all ground disturbing activities would be similar as those described for the proposed project. As discussed in **Section 4.5, Cultural Resources**, excavation activities associated with the proposed project has the potential result in significant impacts to cultural resources. However, with implementation of Mitigation Measures **MM 4.5-1** and **MM 4.5-2** requires that if archaeological materials are encountered the inadvertent discover protocol would be implemented for any cultural resource or human remains. The potential is considered unlikely and these measures would reduce potential impacts to cultural resources and would reduce impacts to less than significant. Similar to the proposed project, this alternative would implement the same mitigation measures; thus, this project alternative would also result in less than significant impacts on cultural resources. Impacts on cultural resources would be similar to those identified for the proposed project.

Energy Resources

Similar to the project, the Locally Sourced Feedstocks Alternative would be required to comply with the California Air Resources Board's (CARB) Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. In addition, the fuel efficiency of the vehicles being used by the employees and visitors under this alternative is expected to increase. During the operations phase of the project, the source of the feedstock would be limited to facilities that are located within Kern County; reducing the distance from which feedstock could be transferred to the composting facility. This alternative would reduce the number and length of trips to the facility to deliver new feed stocks. As such, the amount of petroleum consumed as a result of vehicular trips to and from the project site during operation would incrementally decrease compared to the proposed project. As discussed in **Section 4.6, Energy**, the project also would implement Mitigation Measure **MM 4.3-5**, which places requirements and limitation on equipment usage such as maintenance, reduced idling times, use of electric equipment, etc., that would reduce inefficiency and fuel/energy consumption. Thus, implementation of this measure would further ensure the project would not result in the inefficient, wasteful, or unnecessary use of energy resources. As such, the wasteful, inefficient, or unnecessary consumption of energy resources would be less than significant under this alternative. Furthermore, similar to the proposed project, the Locally Sourced Feedstocks Alternative would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Based on the above, impacts under the Locally Sourced Feedstocks Alternative related to energy consumption would be less than significant, but incrementally reduced compared to those of the proposed project.

Geology and Soils

Similar to the proposed project, Locally Sourced Feedstocks Alternative would include a request for land use entitlements necessary to facilitate the updated and continued use of a compost facility. Thus, all ground disturbing activities would be similar as those described for the proposed project. As discussed in **Section 4.7, Geology and Soils**, construction activities associated with the proposed project have the potential to result in erosion on the project site. However, implementation of Mitigation Measures **MM 4.7-1** through **MM 4.7-4**, as well as the required Stormwater Management Pollution Prevention Plan (SWPPP) and Best Management Practices (BMP's), would significantly reduce the erosion potential of full project build-out. Additionally, the proposed project would be subject to environmental review and would be required to conform to the Kern County General Plan

and Building Code and, therefore, full project build-out would result in less than significant impacts to geology and soils. Since the Locally Sourced Feedstocks Alternative maintains the same facility modifications, this project alternative would result in less than significant impacts on geology and soils with mitigation incorporated, similar to the proposed project.

Greenhouse Gas Emissions

The Locally Sourced Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility to within Kern County. Under this alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. Construction related emissions related to this alternative would be similar to those identified for the proposed project. During the operations phase of the project, the source of the feedstock would be limited to facilities that are located within Kern County; reducing the distance from which feedstock could be transferred to the composting facility. This alternative would reduce the number and length of trips to the facility to deliver new feed stocks. However, this reduction may be offset because, this alternative would result in lower volumes of food material being processed by the facility and more waste being processed through anaerobic decomposition in nearby landfills. Thus, this would increase greenhouse gas emissions resulting from the operation of this alternative as opposed to the proposed project. Nevertheless, based on the project level analysis of GHG impacts discussed in **Section 4.8, Greenhouse Gases**, and GHG reduction benefits of composting in relation to landfilling food wastes, similar to the proposed project, full buildout would not significantly increase GHG emissions. Therefore, the Locally Sourced Feedstocks Alternative maintains the same facility modifications, but with incrementally reduced vehicle miles traveled from feedstock sources, impacts to GHG emissions would be both less than significant and similar to the proposed project.

Hazards and Hazardous Materials

Under the Locally Sourced Feedstocks Alternative, the land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. As discussed in **Section 4.9, Hazards and Hazardous Materials**, the relatively limited use of hazardous materials during construction would be controlled through compliance with applicable regulations. During operation, there would not be any substantive changes in relation to the hazardous materials already in use at the site. In addition, similar to the proposed project, this alternative would be required to implement Mitigation Measure **MM 4.9-1** and **MM 4.9-3**, which requires an update of the existing Hazardous Materials Business Plan (HMBP) to include any changes to the hazardous materials or waste use with the project and would describe proper handling, storage, transport, and disposal techniques and methods to minimize hazards. With implementation of these mitigation measures and compliance with applicable regulations, impacts due to hazards and hazardous materials under the Locally Sourced Feedstocks Alternative would be less than significant, similar to the proposed project.

Hydrology and Water Quality

Under the Locally Sourced Feedstocks Alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. As discussed in **Section 4.10, Hydrology and Water Quality**, the proposed project would result in less than significant impacts to groundwater levels, less than significant impacts to water quality with implementation of Mitigation

Measures **MM 4.10-1** and **MM 4.10-2**, as well as adherence to the SWPPP and associated BMPs, and less than significant impacts to erosion, drainage, and flooding with implementation of Mitigation Measure **MM 4.7-2** (see **Section 4.7, *Geology and Soils***). Since this alternative maintains the same facility modifications, but with feedstock limited to Kern County sources, this project alternative would also be required to implement Mitigation Measures **MM 4.9-1 through MM 4.9-3** (see **Section 4.9, *Hazards and Hazardous Materials***) and adhere to the SWPPP and associated BMPs. With implementation of these mitigation measures and standards, impacts for this alternative would be less than significant and similar to the proposed project.

Land Use and Planning

The land use entitlements required to facilitate the updated and continued use of a compost facility would be the same under the Locally Sourced Feedstocks Alternative as the proposed project. This alternative would require the same modification of the existing CUP No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) to include changes to current operations as the proposed project within the South Kern Industrial Center Specific Plan (SKICSP). The purpose of the SKICSP is to be used as a planning tool to closely define the planning criteria of the specific plan area and to define the nature and extent of growth and to ensure orderly development. This alternative also would be consistent with the SKICSP and the associated land use designation that include 2.5 (Flood Hazard Area) and 3.4 (Solid Waste Facilities). As discussed in **Section 4.11, *Land Use and Planning***, with the approval of all discretionary requests, the proposed project would be an allowable use that would not conflict with the underlying land use designation or zoning classification for the project site. Thus, similar to the proposed project, the Locally Sourced Feedstocks Alternative would result in less-than-significant impacts to land use and planning.

Mineral Resources

The Locally Sourced Feedstocks Alternative would limit the supply of new feedstocks at the existing compost facility to pre-consumer food waste from large scale industrial or commercial users such as food processors, packing houses, and grocery stores. Under this alternative, the land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. The Locally Sourced Feedstocks Alternative would maintain the same facility modifications outlined in **Chapter 3, *Project Description***, but restricts the existing annual 670,000-ton capacity of the facility to sources from within Kern County. Similar to the proposed project, the Locally Sourced Feedstocks Alternative would not impact the use of any mineral or petroleum operations in any adjacent or nearby areas, nor would it preclude any future mineral extraction activities. This alternative would occur on the same site and as such would not affect any existing mineral resources zone within the boundaries or directly affect a site with a known mineral resource. Therefore, there impacts in this regard associated with the Locally Sourced Feedstocks Alternative would result in similar impacts to mineral resources as the proposed project.

Noise

The Locally Sourced Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility to within Kern County. The land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. Similar to the proposed project,

temporary construction-related noise from heavy equipment operation, truck deliveries, and worker commute trips associated with project construction would occur and affect nearby sensitive receptors. Overall, these impacts would be less than significant. During operation, noise generated by this alternative would include noise from operation of the composting facility and daily truck trips to the project site. However, the number of truck trips would be incrementally reduced because the feedstock delivered to the project site would be limited to those sources from within Kern County. Given the same development area, the Locally Sourced Feedstocks Alternative would result in incrementally reduced operational noise impacts as compared to the proposed project. Therefore, similar to the proposed project, noise impacts would be less than significant.

Public Services

The Locally Sourced Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility to within Kern County. Under this alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. Similar to the proposed project, this alternative would not result in a substantial increase in the service demand for fire emergency, and/or police protection services. Therefore, the Locally Sourced Feedstocks Alternative would have a less-than-significant impact to the provision of fire, emergency, and police protection services in Kern County, similar to the proposed project.

Transportation and Traffic

The Limited New Feedstocks Alternative would limit new feedstocks at the existing compost facility to sources from within Kern County. Under this alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. Similar to the proposed project, temporary construction-related trips from heavy equipment operation, truck deliveries, and worker commute trips associated with project construction would occur on surrounding roadways. Overall, these impacts would be less than significant. During operation, trips generated by this alternative would include trips generated by operation of the composting facility and daily truck trips to the project site. However, the number of truck trips would be incrementally reduced because the feedstock delivered to the project site would be limited to those sources from within Kern County. As discussed in **Section 4.14, *Transportation and Traffic***, construction and operation activities associated with the proposed project would be less than significant. Similar to the proposed project, this alternative potential transportation and traffic impacts would be less than significant; however, overall, the Locally Sourced Feedstocks Alternative would result in incrementally fewer impacts to transportation and traffic than the proposed project.

Tribal Cultural Resources

The Locally Sourced Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility to within Kern County. Under this alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. As discussed in **Section 4.15, *Tribal Cultural Resources***, construction and operational activities associated with the proposed project would be less than significant. All ground disturbing activities would be similar as those described for the proposed project. Thus, this project alternative would also result in less than

significant impacts on tribal cultural resources. Impacts on tribal cultural resources would be similar to those identified for the proposed project.

Utilities and Service Systems

Under the Locally Sourced Feedstocks Alternative, the area of development would remain the same and, as such, the need for utilities and services systems would be the same compared to the proposed project. As discussed in **Section 4.16, Utilities and Service Systems**, impacts related to water, wastewater, and storm water drainage would be less than significant under the proposed project. Nevertheless, the proposed project would be required to implement Mitigation Measures **MM 4.16-1** and **MM 4.16-2**, which would reduce the amount of construction and operational waste being sent to the local landfill by requiring the separation and disposal of recyclable materials and solid waste. This alternative could result in increased amounts of food waste going to landfills if feedstock sources outside of Kern County are not able to find other composting facilities to accept their feedstock. However, overall impacts would be similar to the proposed project. In addition, the Locally Sourced Feedstocks Alternative would be required to implement the listed mitigation measures and impacts would be less than significant.

Wildfire

The Locally Sourced Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility to within Kern County. Under this alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. Under the Locally Sourced Feedstocks Alternative, the area of development would remain the same the proposed project. As discussed in **Section 4.17, Wildfire**, impacts related to wildfire hazards would be less than significant.

As with the proposed project, this alternative is not classified as being within a high fire hazard severity zone and is not anticipated to physically impede the existing emergency response plans, emergency vehicle access, or personnel access to the site. The site is located in a rural, sparsely developed area with limited population. The project site is not located along an identified emergency evacuation route and is not identified in any adopted emergency evacuation plan. Therefore, the Locally Sourced Feedstocks Alternative would not substantially impair an adopted emergency response plan or emergency evacuation plan. Similarly, impacts under this alternative related to exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would be less than significant. Therefore, potential impacts from wildfire under the Locally Sourced Feedstocks Alternative are less than significant, similar to the proposed project.

Comparison of Impacts

The Locally Sourced Feedstocks Alternative would result in similar impacts to aesthetics, agricultural resources, biological resources cultural resources, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, public services, tribal cultural resources, and utilities and service systems. This alternative would result in incrementally reduced impacts on air quality, noise, and transportation and traffic as a result of

feedstock sources being limited to Kern County.

Relationship to Project Objectives

This alternative would meet some of the project objectives, but it would not meet the project objectives related to expanding an existing regional organics recycling facility to meet new state law that require a higher percentage of organics recycling. The project would not meet the following project objectives:

- Assist in obtaining the State’s targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025 per SB 1383;
- Continue to operate a state-of the art regional composting facility to meet the organic waste diversion requirements enacted by recent California legislation (AB 32, AB 1826, SB 1383, etc.) to reduce volatile organic compound and greenhouse gas emissions through the diversion of organic material that would otherwise be disposed of in a landfill;
- Accommodate the growing market demand for “Organic” compost by targeting agricultural material, food material, vegetative food material, manure, and other compostable, organic, and recyclable materials to produce high quality compost for the agricultural community and customers.

Alternative 3: Limited New Feedstocks Alternative

Environmental Impact Analysis

Aesthetics

The Limited New Feedstocks Alternative would limit the supply of new feedstocks at the existing compost facility to pre-consumer food waste from large scale industrial or commercial users such as food processors, packing houses, and grocery stores. Under this alternative, the land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. The Limited New Feedstocks Alternative would maintain the same facility modifications outlined in **Chapter 3, Project Description**, but restricts the existing annual 670,000-ton capacity of the facility to sources from within Kern County. Similar to the proposed project, the Limited New Feedstocks Alternative would increase the maximum pile heights from 15 feet to 20 feet. Similar to the proposed project, this alternative would not adversely impact a scenic vista or scenic resources along a designated scenic highway. The proposed modifications to the existing composting facility would not result in impacts on the visual character of the surrounding area or generate new sources of substantial light or glare. Potential impacts were determined to be less than significant for the proposed project and would be similar under the No Project Alternative.

Agricultural Resources

The Limited New Feedstocks Alternative would limit the supply of new feedstocks and they would be restricted to sources that supply pre-consumer feedstocks. Under this alternative, the land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. The Limited New Feedstocks Alternative would maintain the same facility modifications outlined in **Chapter 3, Project Description**, but restricts the existing annual 670,000-ton capacity of the facility to sources from within Kern County. Similar to the proposed project, the Limited New Feedstocks Alternative would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses as there are no agricultural uses currently on the project site. In addition, similar to the proposed project, implementation of this Alternative would not result in the cancellation of an existing Williamson Act contract or contribute to a loss of forest land in Kern County. Therefore, there would be no impact and the Limited New Feedstocks Alternative would result in similar agricultural resource impacts as the proposed project.

Air Quality

Under the Limited New Feedstocks Alternative, the source of new feedstocks at the existing compost facility would be restricted to sources that supply pre-consumer feedstocks. Given that the area of development would not change compared to the proposed project, the extent of this alternative's construction-related impacts to air quality would remain the same as the proposed project. However, during operation the source of the feedstock would be limited to sources that provide pre-consumer food waster such as growers and packing houses. This alternative would result in a slight decrease in truck trips, using only large volume trucks not smaller vehicles. This alternative would reduce the number of overall trips to the facility to deliver new feed stocks. Subsequently, ROG and NOx emissions would be reduced for the Limited New Feedstocks Alternative compared to the proposed project. Similar to the proposed project, this alternative would be required to implement Mitigation Measure **MM 4.3-1**, which would require the project to comply with the applicable state and federal air pollution control law and regulations and those of the San Joaquin Valley Air Pollution Control District. As with the proposed project, air quality impacts under this alternative would be significant and unavoidable at both the project level (for long term exposure of PM_{2.5}) and at a cumulative level due to the valley's non-attainment status for PM_{2.5}. Therefore, air quality impacts under this alternative would be incrementally less than the proposed project but still significant and unavoidable.

Biological Resources

The Limited New Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility to within Kern County. Under this alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. As discussed in **Section 4.4, Biological Resources**, with implementation of Mitigation Measures **MM 4.4-1** through **MM 4.4-11**, full project build-out would result in less than significant impacts on biological resources. Since this alternative maintains the same facility modifications, but with limits on the feedstock sources, this alternative would result in less-than-significant impacts to biological resources with mitigation incorporated. Impacts would be similar to those identified for the proposed project.

Cultural Resources

Similar to the proposed project, Limited New Feedstocks Alternative would include a request for land use entitlements necessary to facilitate the updated and continued use of a compost facility. Thus, all ground disturbing activities would be similar as those described for the proposed project. As discussed in **Section 4.5, Cultural Resources**, excavation activities associated with the proposed project has the potential result in significant impacts to cultural resources. However, with implementation of Mitigation Measures **MM 4.5-1** and **MM 4.5-2**, potential impacts to cultural resources would be reduced to less than significant. Similar to the proposed project, this alternative would implement the same mitigation measures; thus, this project alternative would also result in less than significant impacts on cultural resources. Impacts on cultural resources would be similar to those identified for the proposed project.

Energy Resources

Similar to the project, the Limited New Feedstocks Alternative would be required to comply with the California Air Resources Board's (CARB) Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. In addition, the fuel efficiency of the vehicles being used by the employees and visitors under this alternative is expected to increase. During the operations phase of the project, the source of the feedstock would be limited to facilities that provide pre-consumer food waste; reducing the distance from which feedstock could be transferred to the composting facility. This alternative would reduce the number and length of trips to the facility to deliver new feed stocks. As such, the amount of petroleum consumed as a result of vehicular trips to and from the project site during operation would incrementally decrease compared to the proposed project. As discussed in **Section 4.6, Energy**, the project also would implement Mitigation Measure **MM 4.3-5**, which places requirements and limitation on equipment usage such as maintenance, reduced idling times, use of electric equipment, etc., that would reduce inefficiency and fuel/energy consumption. Thus, implementation of this measure. As such, the wasteful, inefficient, or unnecessary consumption of energy resources would be less than significant under this alternative. Furthermore, similar to the proposed project, the Limited New Feedstocks Alternative would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Based on the above, impacts under the Limited New Feedstocks Alternative related to energy consumption would be less than significant, but incrementally reduced compared to those of the proposed project.

Geology and Soils

Similar to the proposed project, Limited New Feedstocks Alternative would include a request for land use entitlements necessary to facilitate the updated and continued use of a compost facility. Thus, all ground disturbing activities would be similar as those described for the proposed project. As discussed in **Section 4.7, Geology and Soils**, construction activities associated with the proposed project have the potential to result in erosion on the project site. However, implementation of Mitigation Measures **MM 4.7-1 through MM 4.7-4**, as well as the required SWPPP and BMP's, would significantly reduce the erosion potential of full project build-out. Additionally, the proposed project would be subject to environmental review and would be required to conform to the Kern County General Plan

and Building Code and, therefore, full project build-out would result in less than significant impacts to geology and soils. Since the Limited New Feedstocks Alternative maintains the same facility modifications, this project alternative would result in less than significant impacts on geology and soils with mitigation incorporated, similar to the proposed project.

Greenhouse Gas Emissions

The Limited New Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility to within Kern County. Under this alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. Construction related emissions related to this alternative would be similar to those identified for the proposed project. During the operations phase of the project, the source of the feedstock would be limited to facilities that provide pre-consumer food waste. This alternative would reduce the number of trips to the facility to deliver new feed stocks. However, this reduction may be offset because this alternative would result in lower volumes of food material being processed by the facility and more waste being processed through anaerobic decomposition in nearby landfills. Thus, this would increase greenhouse gas emissions resulting from the operation of this alternative as opposed to the proposed project. Nevertheless, based on the project level analysis of GHG impacts discussed in Section 4.8, *Greenhouse Gases*, and GHG reduction benefits of composting in relation to landfilling food wastes, similar to the proposed project, full buildout would not significantly increase GHG emissions. Therefore, the Limited New Feedstocks Alternative maintains the same facility modifications, but with incrementally reduced vehicle miles traveled from feedstock sources, impacts to GHG emissions would be less than significant, similar to the proposed project.

Hazards and Hazardous Materials

Under the Limited New Feedstocks Alternative, the land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. As discussed in **Section 4.9**, *Hazards and Hazardous Materials*, the relatively limited use of hazardous materials during construction would be controlled through compliance with applicable regulations. During operation, there would not be any substantive changes in relation to the hazardous materials already in use at the site. In addition, similar to the proposed project, this alternative would be required to implement Mitigation Measure **MM 4.9-1** and **MM 4.9-2**, which requires an update of the existing HMBP to include any changes to the hazardous materials or waste use with the project and would describe proper handling, storage, transport, and disposal techniques and methods to minimize hazards. With implementation of these mitigation measures and compliance with applicable regulations, impacts due to hazards and hazardous materials under the Limited New Feedstocks Alternative would be less than significant, similar to the proposed project.

Hydrology and Water Quality

Under the Limited New Feedstocks Alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. As discussed in **Section 4.10**, *Hydrology and Water Quality*, the proposed project would result in less than significant impacts to groundwater levels, less than significant impacts to water quality with implementation of Mitigation Measures **MM 4.10-1** and **MM 4.10-2**, as well as adherence to the SWPPP and associated BMPs,

and less than significant impacts to erosion, drainage, and flooding with implementation of Mitigation Measure **MM 4.7-2** (see **Section 4.7, Geology and Soils**). Since this alternative maintains the same facility modifications, but with feedstock limited to Kern County sources, this project alternative would also be required to implement Mitigation Measures **MM 4.9-1** through **MM 4.9-3** (see **Section 4.9, Hazards and Hazardous Materials**) and adhere to the SWPPP and associated BMPS. With implementation of these mitigation measures and standards, impacts for this alternative would be less than significant and similar to the proposed project.

Land Use and Planning

The land use entitlements required to facilitate the updated and continued use of a compost facility would be the same under the Limited New Feedstocks Alternative as the proposed project. This alternative would require the same modification of the existing CUP No. 2, Map No. 158 (Approved October 22, 2002; Resolution No. 2002-421) to include changes to current operations as the proposed project within the South Kern Industrial Center Specific Plan (SKICSP). The purpose of the SKICSP is to be used as a planning tool to closely define the planning criteria of the specific plan area and to define the nature and extent of growth and to ensure orderly development. This alternative also would be consistent with the SKICSP and the associated land use designation that include 2.5 (Flood Hazard Area) and 3.4 (Solid Waste Facilities). As discussed in **Section 4.11, Land Use and Planning**, with the approval of all discretionary requests, the proposed project would be an allowable use that would not conflict with the land use or zoning classification for the project site. Thus, similar to the proposed project, the Limited New Feedstocks Alternative would result in less-than-significant impacts to land use and planning.

Mineral Resources

The Limited New Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility to within Kern County. The Limited New Feedstocks Alternative would maintain the same facility modifications outlined in Chapter 3, Project Description, but restricts the existing annual 670,000-ton capacity of the facility to sources from within Kern County. Similar to the proposed project, the Limited New Feedstocks Alternative would not impact the use of any mineral or petroleum operations in any adjacent or nearby areas, nor would it preclude any future mineral extraction activities. This alternative would occur on the same site and as such would not affect any existing mineral resources zone within the boundaries or directly affect a site with a known mineral resource. Therefore, there impacts in this regard associated with the Locally Sourced Feedstocks Alternative would result in similar impacts to mineral resources as the proposed project

Noise

The Limited New Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility to within Kern County. The land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. Similar to the proposed project, temporary construction-related noise from heavy equipment operation, truck deliveries, and worker commute trips associated with project construction would occur and affect nearby sensitive receptors. Overall, these impacts would be less than significant. During operation, noise generated by this alternative would include noise from operation of the composting facility and daily truck trips to the

project site. However, the number of truck trips would be incrementally reduced because the feedstock delivered to the project site would be limited to those sources that provide only pre-consumer feed stocks. No post consumer feed stocks would be accepted at the facility. Given the same development area, the Limited New Feedstocks Alternative would result in incrementally reduced operational noise impacts as compared to the proposed project. Therefore, similar to the proposed project, noise impacts would be less than significant.

Public Services

The Limited New Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility to sources that provide only pre-consumer food waste. Under this alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. Similar to the proposed project, this alternative would not result in a substantial increase in the service demand for fire emergency, and/or police protection services. Therefore, the Limited New Feedstocks Alternative would have a less-than-significant impact to the provision of fire, emergency, and police protection services in Kern County, similar to the proposed project.

Transportation and Traffic

The Limited New Feedstocks Alternative would limit new feedstocks at the existing compost facility to sources that provide only pre-consumer food waste. Under this alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. Similar to the proposed project, temporary construction-related trips from heavy equipment operation, truck deliveries, and worker commute trips associated with project construction would occur on surrounding roadways. Overall, these impacts would be less than significant. During operation, trips generated by this alternative would include trips generated by operation of the composting facility and daily truck trips to the project site. However, the number of truck trips would be incrementally reduced because the feedstock delivered to the project site would be limited to sources that provide only pre-consumer food waste. As discussed in **Section 4.14, *Transportation and Traffic***, construction and operation activities associated with the proposed project would be less than significant. Similar to the proposed project, this alternative potential transportation and traffic impacts would be less than significant; however, overall, the Limited New Feedstocks Alternative would result in incrementally fewer impacts to transportation and traffic than the proposed project.

Tribal Cultural Resources

The Limited New Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility to those sources that only provide pre-consumer food waste. Under this alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. As discussed in **Section 4.15, *Tribal Cultural Resources***, construction and operational activities associated with the proposed project would be less than significant. All ground disturbing activities would be similar as those described for the proposed project. Thus, this project alternative would also result in less than significant impacts on tribal cultural resources. Impacts on tribal cultural resources would be similar to those identified for the proposed project.

Utilities and Service Systems

Under the Limited New Feedstocks Alternative, the area of development would remain the same and, as such, the need for utilities and services systems would be the same compared to the proposed project. As discussed in **Section 4.16, *Utilities and Service Systems***, impacts related to water, wastewater, and storm water drainage would be less than significant under the proposed project. Nevertheless, the proposed project would be required to implement Mitigation Measures **MM 4.16-1** and **MM 4.16-2**, which would reduce the amount of construction and operational waste being sent to the local landfill by requiring the separation and disposal of recyclable materials and solid waste. Composting only pre-consumer food waste would result in reduced sorting and processing to remove plastics and other non-compostable materials that require disposal at County landfills. However, this benefit could be offsite if having few composting options for post-consumer food wastes results in more food waste disposed of in County landfills. Similar to the proposed project, the Limited New Feedstocks Alternative would be required to implement the above mitigation measures and, thus, impacts would be less than significant.

Wildfire

The Limited New Feedstocks Alternative would limit the source of new feedstocks at the existing compost facility those sources that only provide pre-consumer food waste. Under this alternative, land use entitlements necessary to facilitate the updated and continued use of a compost facility would still be required. Under the Limited New Feedstocks Alternative, the area of development would remain the same the proposed project. As discussed in **Section 4.17, *Wildfire***, impacts related to wildfire hazards would be less than significant.

As with the proposed project, this alternative is not classified as being within a high fire hazard severity zone and is not anticipated to physically impede the existing emergency response plans, emergency vehicle access, or personnel access to the site. The site is located in a rural, sparsely developed areas with limited population. The project site is not located along an identified emergency evacuation route and is not identified in any adopted emergency evacuation plan. Therefore, the Limited New Feedstocks Alternative would not substantially impair an adopted emergency response plan or emergency evacuation plan. Similarly, impacts under this alternative related to exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would be less than significant. Therefore, potential impacts from wildfire under the Limited New Feedstocks Alternative are less than significant, similar to the proposed project.

Comparison of Impacts

This alternative would result in impacts very similar to the proposed project with slight decreases in impacts to Air Quality, Energy, Noise, and Transportation. This alternative would reduce truck trips, using only large volume trucks not smaller vehicles, decrease the sorting and processing to remove plastics and other non-compostable materials that require disposal at County landfills. In addition, reduction in trips also would help incrementally reduce impacts associated with emissions, energy use, and overall noise production. This Alternative also would result in greater demand for new recycling facilities that can process the remaining state mandated feedstocks, some at a greater haul distance than SKIC.

The Limited New Feedstocks Alternative would result in similar impacts to aesthetics, agricultural resources, biological resources cultural resources, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, public services, tribal cultural resources, and utilities and service systems. As explained above, this alternative would result in incrementally reduced impacts on air quality, noise, and transportation and traffic as a result of feedstock sources being limited to Kern County.

Relationship to Project Objectives

This alternative would meet some of the project objectives, but it would not meet the project objectives related to expanding an existing regional organics recycling facility to meet new state law that require a higher percentage of organics recycling. The project would not meet the following project objectives:

- Assist in obtaining the State’s targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025 per SB 1383;
- Continue to operate a state-of the art regional composting facility to meet the organic waste diversion requirements enacted by recent California legislation (AB 32, AB 1826, SB 1383, etc.) to reduce volatile organic compound and greenhouse gas emissions through the diversion of organic material that would otherwise be disposed of in a landfill;
- Accommodate the growing market demand for “Organic” compost by targeting agricultural material, food material, vegetative food material, manure, and other compostable, organic, and recyclable materials to produce high quality compost for the agricultural community and customers.

6.8 Environmentally Superior Alternative

As presented in the comparative analysis above, and as shown in **Table 6-1, Comparison of Project Alternatives**, there are a number of factors in selecting the environmentally superior alternative. An EIR must identify the environmentally superior alternative to the project. Alternative 1, the No Project Alternative, would be environmentally superior to the project on the basis of its minimization or avoidance of physical environmental impacts.

However, CEQA Guidelines Section 15126.6(e)(2) states:

The “no project” analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the “no project” alternative, the EIR shall also

identify an environmentally superior alternative among the other alternatives.

Because the No Project Alternative cannot be the Environmentally Superior Alternative under CEQA, the Environmentally Superior Alternative is considered to be Alternative 2, or the Locally Sourced Feedstocks Alternative. This alternative would reduce or have a similar impact to the majority of the less-than-significant impacts that would occur under the proposed project. This alternative would reduce the number and length of truck trips to the existing composting facility. Potential impacts on air quality would remain significant and unavoidable as a result of the County's current non-attainment status for PM_{2.5}. However, no substantially adverse and long-term impacts would occur to the environment. Overall, this alternative would result in fewer environmental impacts, both short-term and long-term, when compared to the proposed project.

Chapter 7 Response to Comments

This chapter is being reserved for, and will be included with, the final EIR.

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Chapter 8

Organizations and Persons Consulted

8.1 Federal

U.S. Army Corps of Engineers	U.S. Environmental Protection Agency Region IX
U.S. Bureau of Land Management	U.S. Fish and Wildlife Service
U.S. Department of Agriculture, Natural Resource Conservation Service	

8.2 State of California

California Air Resources Board	California Energy Commission
California Department of Conservation	California Highway Patrol
California Department of Fish & Wildlife	California Department of Resources Recycling and Recovery
California Department of Food and Agriculture	California Governor's Office of Planning and Research
California Department of Health Services	California Public Utilities Commission
California Department of Industrial Relations, Division of Occupational Safety and Health	California Regional Water Quality Control Board, Central Valley Region
California Department of Public Health	California State Clearinghouse
California Department of Resources, Recycling and Recovery	California State University, Bakersfield
California Department of Transportation	Caltrans District 6
California Department of Toxic Substances Control	Caltrans District 9
Office of State Geologist	State Water Resources Control Board, Division of Drinking Water

8.3 Regional and Local

Aera Energy	Inyo County Planning Department	Local Agency Formation Commission
Algonquin Pwr Bak Land Holdings	Kern Audubon Society	Los Angeles County Regional Planning Department
Bakersfield Crude Terminal, LLC	Kern Council of Governments	Lozeau Drury LLP
California City Planning Department	Kern County Administrative Officer	Mojave Town Council
California Resources Petroleum Corporation	Kern County Agriculture Department	Mojave Foundation
California Farm Bureau	Kern County Board of Supervisors	Native American Heritage Council of Kern County
Center on Race, Poverty & the Environment	Kern County Environmental Health Services Department	Nahabedian Exploration Group LLC.
Chumash Council of Bakersfield	Kern County Fire Department	Pacific Gas and Electric

City of Arvin	Kern County Library, Arvin Branch	Porter Fred & Sandra Family
CIG Logistics, LLC	Lakeside Union School District	San Bernardino County Planning Department
City of Bakersfield Planning Department	Terra-Gen Power	Rosedale-Rio Bravo Water District
City of Bakersfield Public Works Department	Renewal Resources Group	Recurrent Energy
City of Delano Planning Department	Kern County Library, Beale Branch	San Luis Obispo County Planning Department
City of Maricopa	Kern County Library, Lamont Branch	San Joaquin Valley Air Pollution Control District
City of McFarland	Kern County Planning and Natural Resources Department	So. San Joaquin Valley Archeology Information Center
City of Ridgecrest	Kern County Public Health Services	Santa Barbara County Resource Management Department
City of Shafter	Kern County Public Works Department	Sierra Club
City of Taft	Kern County Sheriff's Department	Southern California Edison
City of Tehachapi	Kern County Superintendent of Schools	Southern California Gas Company
City of Wasco	Kern County Water Agency	South Kern Industrial Center Inc.
Committee for a Better Arvin	Kern Groundwater Authority	Tulare County Planning Development Department
C&A Farms LLC.	Kern High School District	Verizon California, Inc.
Congentrix Sunshine, LLC.	Kern Mosquito Abatement District	Ventura County Resource Management Agency Planning Division
David Laughing Horse Robinson	Kern Valley Indian Council	West Side Mosquito Abatement District
David Walsh	Kings County Planning Agency	Wheeler Ridge Maricopa Water District
Defenders of Wildlife	LIUNA	
EDP Renewable Company	Vestas	
Fotowatio Renewable Ventures		
Henry Miller Water District		
Los Angeles Audubon		
Integrated Waste Management		
Kern County Local History Room		
Kern County Parks and Recreation		

8.4 Individuals

8.5 Tribal Organizations

Big Pine Paiute Tribe of Owens Valley	Northern Chumash Tribe
Chumash Council of Bakersfield	San Fernando Band of Mission Indians
Ferandeño Tataviam Band of Mission Indians	San Manuel Band of Mission Indians
Kern Valley Indian Community	Santa Rosa Rancheria Tachi Yokut Tribe
Kitanemuk & Yowlumne Tejon Indians	Twenty-Nine Palms Band of Mission Indians

Tejon Indian Tribe
Torres Martinez Desert Cahuilla Indians
Tubatulabals of Kern County

Tule River Indian Tribe
Wuksache Indian Tribe/Eshom Valley Band

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Chapter 9

List of Preparers

9.1 Lead Agency

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Jonathan Jensen – Staff Planner

Mark Tolentino – Staff Planner

9.2 Technical Assistance

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Brad Stoneman – Environmental Planner

Taylor Blanford – Technical Analyst

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Dudek

Tommy Molioo, Senior Biologist

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Chapter 10 Bibliography

Aesthetics

California Department of Transportation (CalTrans), 2019 – *State Scenic Highways*. Available: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways> Accessed: May 6, 2021.

California Natural Resource Agency, 2018, *California Environmental Quality Act (CEQA) Guidelines*, Available at https://files.resources.ca.gov/ceqa/docs/2018_CEQA_FINAL_TEXT_122818.pdf Accessed August 11, 2021

Federal Highway Administration (FHWA), 2020a – *About America's Byways*. Accessed: December 4, 2020.

Federal Highway Administration (FHWA), 2020b – *CA Map*. Accessed: December 4, 2020.

Agricultural Resources

California Department of Conservation (CDOC), 2018 – *Farmland Mapping & Monitoring Program*. Available: <https://www.conservation.ca.gov/dlrp/fmmp> Accessed: January 29, 2021.

California Department of Conservation (CDOC), 2019 – *Williamson Act Program – Program Overview, Laws and Policy, Contracts, Removing Contracts, Open Space Subventions, Reports and Statistics*. Available: <https://www.conservation.ca.gov/dlrp/wa> Accessed: January 5, 2021.

Department of Agriculture and Measurement Standards, 2019 – *Kern County Crop Report*. Available: <http://www.kernag.com/caap/crop-reports/crop-reports.asp> Accessed: January 15, 2019

Kern Economic Development Corporation (KEDC), 2021, *Demographic Forecast*, Available: <https://kernedc.com/wp-content/uploads/2021/01/2021-Kern-EDC-Market-Overview.pdf>.

NRCS, 2020. *United States Department of Agriculture – Natural Resources Conservation Service. Farmland Protection Policy Act*. Available: https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/fppa/?cid=nrcs143_008275 Accessed: January 5, 2021.

Air Quality

California Air Pollution Control Officers Association (CAPCOA), 2013. *California Emissions Estimator Model. Version 2013.2.2*. Online at: <http://www.caleemod.com/>.

CAPCOA, 2016. *What is Nitrogen Oxide*. Available at: http://www.capcoa.org/health-effects/#What_is_Nitrogen_Oxide.

CAPCOA. 2016. *Air Toxic “Hot Spots” Program Facility Prioritization Guidelines (Draft)*. Online at: <http://www.capcoa.org/wp-content/uploads/2016/04/CAPCOA%20Prioritization%20Guidelines%20-%20April%202016%20Draft.pdf>.

- California Environmental Protection Agency (Cal/EPA). 2015a. *Air Toxics Hot Spots Program. Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment (OEHHA)*. February. Online at: http://oehha.ca.gov/air/hot_spots/hotspots2015.html.
- California Air Resources Board (CARB), 2009. *History of Sulfates Air Quality Standard*. Available at: <http://www.arb.ca.gov/research/aaqs/caaqs//sulf-1/sulf-1.htm>.
- CARB, 2016a. *Sulfate & Health*. Updated May 4, 2016. Available at: <https://ww2.arb.ca.gov/resources/sulfate-and-health>
- CARB and American Lung Association of California, 2007. *Recent Research Findings: Health Effects of Particulate Matter and Ozone Air Pollution*. November 2007.
- Dockery, D. W. and Pope, C.A., III, 2006. *Health Effects of Fine Particulate Air Pollution: Lines that Connect*. *Journal of the Air and Waste Management Association*, Volume 56 Pp.709-742, 2006.
- Fierro, Maria A. et al, 2001. *Adverse Health Effects of Exposure to Ambient Carbon Monoxide*. September 2001.
- Kern Council of Governments (Kern COG), 2015. *Final Regional Transportation Plan*, June 19, 2014, Available at: <http://www.kerncog.org/regional-transportation-plan>.
- Kern County, 2006. *Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports*, December 2006.
- Kern County Planning Department (KCPD). 2009. *Kern County General Plan*. Online at: https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP_Complete.pdf
- McConnell, R., Berhane, K., Gilliland, F., London, S.J., Islam, T., Gauderman, W.J., Avol, E., Margolis, H.G., and J.M. Peters. 2012. *Asthma in exercising children exposed to ozone: a cohort study*. *Lancet*, 359:386–91. 2002.
- Peters, A., Dockery, D.W., Muller, J.E., Mittleman, M.A., 2001. *Increase Particulate Air Pollution and the Triggering of Myocardial Infarction*, *Circulation*, 103: 2810–2815, 2001.
- Ramboll, 2017. *Recology Blossom Valley Organics –South: Conditional Use Permit Modification Air Quality and Greenhouse Gas Technical Report*. October. (Appendix B of this EIR).
- Rutgers & Schuler. 2017. *Traffic Study Blossom Valley Organics - South Compost Facility*. May.
- San Joaquin Valley Air Pollution Control District (SJVAPCD). 1992. *Rule 2010*. Amended December 17, 1992. Available Online at <https://www.valleyair.org/rules/currnrules/r2010.pdf>
- San Joaquin Valley Air Pollution Control District (SJVAPCD). 1992. *Rule 2201*. Amended February 18, 2016. Available Online at <https://www.valleyair.org/rules/currnrules/Rule22010411.pdf>
- San Joaquin Valley Air Pollution Control District (SJVAPCD). 2002. *Guide for Assessing and Mitigating Air Quality Impacts*. Last updated January 10, 2002. Online at: <https://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf>
- SJVAPCD, 2015a. *Final Draft Guidance for Assessing and Mitigating Air Quality Impacts*. Online at: <https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF> Accessed August 5, 2021

- SJVAPCD. 2016b. *Storage Tank Diesel Fugitives*. Last updated March 11, 2016. Online at: [http://www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Oilfield/Tanks Diesel and Gasoline Fugitives.xls](http://www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Oilfield/Tanks%20Diesel%20and%20Gasoline%20Fugitives.xls).
- SJVAPCD, 2018. *Eastern Kern APCD Attainment Status*. Available at <http://www.valleyair.org/aqinfo/attainment.htm>.
- San Joaquin Valley Technology Advancement Program (SJVTAP). 2013. *Greenwaste Compost Site Emissions Reductions from Solar-Powered Aeration and Biofilter Layer*. Online at: http://www.valleyair.org/Grant_Programs/TAP/documents/C-15636-ACP/C-15636_ACP_FinalReport.pdf.
- U.S. Environmental Protection Agency (EPA). 2000. *Technology transfer network, Air Toxics Website*. Available at <http://www.epa.gov/ttn/atw/>.
- USEPA. 2006. AP-42, *Volume I, Fifth Edition. §13.2.2. Unpaved Roads*. November. Online at: <https://www3.epa.gov/ttnchie1/ap42/ch13/final/c13s0202.pdf>. Accessed January 29, 2017.
- USEPA. 2011. AP-42, *Volume I, Fifth Edition. §13.2.1. Paved Roads*. January. Online at: <https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-section-1321-paved-roads-related-information-0>. Accessed August 5, 2021
- USEPA, 2012b. *Integrated Science Assessment for Lead (Third External Review Draft), November 2012*. Available at: <http://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=242655#Download>.
- U.S. Environmental Protection Agency (EPA), 2016a. *Carbon Monoxide (CO) Pollution in Outdoor Air*. Last updated February 23, 2016. Available at: <https://www.epa.gov/co-pollution>.
- Valley Fever Center for Excellence, 2019a. *Order the Right Tests*. Available at: <https://vfce.arizona.edu/valley-fever-people/order-right-tests>
- Valley Fever Center for Excellence, 2019b. *Initiate Management*, Available at: <https://vfce.arizona.edu/valley-fever-people/initiate-management>
- Valley Fever Center for Excellence, 2019c. *Check for Complications*. Available at: <https://vfce.arizona.edu/valley-fever-people/check-complications>
- Valley Fever Center for Excellence, 2019d. *Check for Risk Factors*. Available at: <https://vfce.arizona.edu/valley-fever-people/check-risk-factors>

Biological Resources

- Dudek, 2020. *Biological Resources Technical Report for the Synagro South Kern Compost Manufacturing Facility Project, Kern County, California* August, 2020Google Earth, 2020.
- Hickman, 1993 – *Bioregions of California*.
- United States Army Corps of Engineers (USACE), 2008 - *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*.
- United States Fish and Wildlife Service (USFWS), 1998, *Recovery Plan for Upland Species of the San Joaquin Valley, California*. Available: https://www.fws.gov/sacramento/es_species/Accounts/Mammals/giant_kangaroo_rat/documents/980930a.pdf Accessed: October 16, 2019.

Western Regional Climate Center (WRCC), 2020 – *Bakersfield 5 NW, POR – Daily Temperature Averages and Extremes*. Available: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0444> Accessed: October 27, 2020.

Cultural

Fredrickson, David A., Cultural Diversity in Early Central California: A View from the North Coast Ranges, *Journal of California Anthropology* 1(1), pp. 41-53, 1974.

Gamble, Lynn H., A Land of Power: The Materiality of Wealth, Knowledge, Authority, and the Supernatural. In *Contemporary Issues in California Archaeology*, edited by T. L. Jones and J. E. Perry, pp. 175-196, Left Coast Press, Inc., Walnut Creek, CA, 2012.

Garone, Phillip, *The Fall and Rise of the Wetlands of California's Great Central Valley*, University of California Press, Berkeley, CA, April 2011.

Gregory, James N., *Dust Bowl Migration: Poverty Stories, Race Stories*, n.d. Online resource [http://faculty.washington.edu/gregoryj/dust bowl migration.htm](http://faculty.washington.edu/gregoryj/dust%20bowl%20migration.htm), accessed September 4, 2013, n.d.

Dust Bowl Legacies: The Okie Impact on California, 1939-1989, *California History*, Fall 1989, pp. 74-85, 1989.

Hoover, Mildred B., Hero E. Rensch, Ethel G. Rensch, and William. N. Abeloe, *Historic Spots in California*. Revised by Douglas E. Kyle. Stanford University Press, Palo Alto, CA, 2002.

JRP Historical Consulting, *Historic Architecture Technical Report: Inventory and Evaluation, Hydrogen Energy California Project*, submitted to URS Corporation, April, 2009.

Moratto, Michael J., *California Archaeology*, Smithsonian Press, San Diego, CA, 1984.

Rosenthal, Jeffrey S., Gregory G. White, and Mark Q. Sutton, Chapter 10: The Central Valley: A View from the Catbird's Seat, in *California Prehistory: Colonization, Culture, and Complexity*, pp. 147-163, edited by T. L. Jones and K.A. Klar, AltaMira Press, Lanham, MD, 2007.

Wallace, William J., Southern Valley Yokuts, in *California*, edited by Robert F. Heizer, pp. 462-470. Handbook of North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C., 1978.

West, James G., Wallace Woolfenden, James A. Wanket, and R. Scott Anderson, Late Pleistocene and Holocene Environments, in *California Prehistory: Colonization, Culture, and Complexity*, pp. 11-34, edited by T. L. Jones and K.A. Klar, AltaMira Press, Lanham, MD, 2007.

Energy

Air and Waste Management Association (AWMA). 1992. *Air Pollution Engineering Manual*

California Air Resources Board, 2017, Emission Factor (EMFAC) Kern County, Available at <https://arb.ca.gov/emfac/emissions-inventory>, Accessed August 13, 2021

California Energy Commission (CEC), 2019, *2019 Total System Electric Generation*, Available at <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation/2019> Accessed August 11, 2021

California Energy Commission (CEC), 2019b, *Electricity Consumption by County*, Available at <https://ecdms.energy.ca.gov/elecbycounty.aspx> accessed August 11, 2021

Energy Information Administration (EIA), 2019, *California State Profile and Energy Estimates*, Available at <https://www.eia.gov/state/?sid=CA> Accessed August 13, 2021

Pacific Gas and Electric Company (PG&E), 2020, *Company Profile*, Available at https://www.pge.com/en_US/about-pge/company-information/profile/profile.page#:~:text=Fast Accessed August 11, 2021

United States Department of Energy (DOE), United States Environmental Protection Agency (USEPA), 2016, *Model Year 2015 Fuel Economy Guide*, Available at <https://www.fueleconomy.gov/feg/pdfs/guides/FEG2015.pdf> Accessed August 13, 2021

Geology

California Geological Survey (CGS), 2002. *California Geomorphic Provinces*, Note 36, 2002.

California Geologic Survey (CGS). 2018. *Publication 42*. [online]: https://www.conservation.ca.gov/cgs/Documents/Publications/Special-Publications/SP_042.pdf Accessed: August 5, 2021.

Kern County, 2019, *Chapter 17.08 Building Code*, Available at https://library.municode.com/ca/kern_county/codes/code_of_ordinances?nodeId=TIT17BUCO_CH17.08BUCO Accessed August 11, 2021

Krazan Associates, 2001 – *Geotechnical Engineering Investigation and Soil Absorption Evaluation - Proposed South Kern Industrial Center*.

South Kern Industrial Center (SKIC), 2001. *Specific Plan*, Amended 2002.

State of California, 2019, *California Building Code*, Available at <https://www.dgs.ca.gov/BSC/Codes> Accessed August 11, 2021

United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), 2009. *Soil Survey, Kern County, California, Southwest Part* issued, 2009.

United States Geological Survey (USGS) – *Topographic Maps* Available: <https://viewer.nationalmap.gov/basic/?basemap=b1&category=histopo,ustopo&title=Map%20View#/> Accessed: December 4, 2020.

United States Geologic Survey, 2020. *U.S. Quaternary Faults* – Available: <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf> Accessed: December 7, 2020.

Greenhouse Gas Emissions

California Air Resources Board (CARB), 2014. *Final Supplement to the Scoping Plan Functional Equivalent Document of the Climate Change Scoping Plan: Building on the Framework, February 2011 - Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document*, August 19.

CARB, 2015. *2020 Business-as-Usual Emissions Projection, 2014 Edition*. Available at: <http://www.arb.ca.gov/cc/inventory/data/bau.htm>.

CARB, 2017a - *The 2017 Climate Change Scoping Plan Update – The Proposed Strategy for Achieving California 2030 Greenhouse Gas Target*. [online:] https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf. Accessed: June 25, 2018.

California Department of Fish and Wildlife (CDFW). 2016. *Draft Additional Environmental Analysis for the Newhall Ranch Resource and Development Plan and Spineflower Conservation Plan Final Environmental Impact Report*. Sacramento, CA. Online at: <https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=NewhallRanchDraftAEA>.

California Department of Water Resources (DWR). 2006. *San Joaquin Valley Groundwater Basin Kern County Subbasin. California's Groundwater Bulletin 118*.

Kern Council of Governments (COG), 2018. - *Regional Transportation Plan/Sustainable Communities Strategy*.

Insight Environmental and Trinity Consultants. 2020. *Air Quality Impact Analysis for the Synagro South Kern Compost Manufacturing Facility Project*. Revised July.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2009. *District Policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. December. Online at: <https://www.valleyair.org/Programs/CCAP/12-17-09/2%20CCAP%20-%20FINAL%20District%20Policy%20CEQA%20GHG%20-%20Dec%2017%202009.pdf>.

SJVAPCD, 2015. *Final Draft Guidance for Assessing and Mitigating Air Quality Impacts*. Online at: <https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF> Accessed August 5, 2021.

United States Environmental Protection Agency (USEPA), 2004. *Regulations for Emissions from Heavy Equipment with Compression-Ignition (Diesel) Engines*. Available: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-heavy-equipment-compression#:~:text=To%20meet%20these%20Tier%204,by%20more%20than%2099%20percent>.

United States Environmental Protection Agency (USEPA), 2014. *Climate Change Indicators*. Available: <https://www.epa.gov/climate-indicators/climate-change-indicators-global-greenhouse-gas-emissions>.

United States Environmental Protection Agency (USEPA), National Highway Traffic Safety Administration (NHTSA), 2016. *Final Rule for Phase 2 Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles*. Available: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-phase-2-greenhouse-gas-emissions-standards-and>

United States Environmental Protection Agency (USEPA), 2016b. *Global Greenhouse gas Emissions Data*. Available: <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>.

United States Environmental Protection Agency (USEPA), 2017a. – *Future of Climate Change*. Available: https://19january2017snapshot.epa.gov/climate-change-science/future-climate-change_.html#:~:text=Future%20sea%20level%20change,-Meltwater%20flowing%20from&text=Estimates%20of%20future%20sea%20level,of%200.66%20to%206.6%20feet.

United States Environmental Protection Agency (USEPA), 2017b. – *Overview of Greenhouse Gases*. Available: <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>.

United States Environmental Protection Agency (USEPA), 2018. *Latest Inventory of U.S. Greenhouse Gas Emission and Sinks Shows Long-Term Reduction, with Annual Variation*. Available: <https://www.epa.gov/newsreleases/latest-inventory-us-greenhouse-gas-emissions-and-sinks-shows-long-term-reductions-0#:~:text=Year%20over%20year%2C%20national,in%202018%20compared%20to%202017>.

United States Environmental Protection Agency (USEPA), National Highway Traffic Safety Administration (NHTSA), 2018. *The Safer Affordable Fuel Efficient (SAFE) Vehicles Proposed Rule for Model Years 2021-2026*. Available: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/safer-affordable-fuel-efficient-safe-vehicles-proposed>.

Hazards

AirNav, 2018. – *Taft-Kern county Airport*. Available: <https://www.airnav.com/airport/L17>. Accessed: December, 2018.

AirNav 2019. *Paradise Lake Airport*. Accessed: October, 2019.

CalRecycle, 2018. *History of California Solid Waste Law, 1985-1989*. Available: <https://www.calrecycle.ca.gov/laws/legislation/calhist/1985to1989>.

Centers for Disease Control (CDC), 2016b – *Plague Compendium*.

Centers for Disease Control (CDC), 2017 – *Lyme Disease*. Available: <https://www.cdc.gov/lyme/stats/tables.html>. Accessed: October, 2019.

Centers for Disease Control (CDC), 2019. – *West Nile Virus Disease cases by State*. Available: <https://www.cdc.gov/westnile/statsmaps/preliminarymapsdata2019/disease-cases-state-2019.html>. Accessed: October, 2019.

Centers for Disease Control (CDC), 2019a – *Yellow Fever*. Available: <https://www.cdc.gov/yellowfever/index.html>. Accessed: October, 2019.

Centers for Disease Control (CDC), 2019b – *Dengue*. Available: <https://www.cdc.gov/dengue/symptoms/index.html>. Accessed: October, 2019.

Centers for Disease Control (CDC), 2019c – *Chikungunya Virus*. Available: <https://www.cdc.gov/chikungunya/index.html>. Accessed: October, 2019.

California Department of Forestry and Fire Protection (CAL FIRE). 2007. *Fire Hazard Severity Zoning in SRAs, Kern County*. Available at https://osfm.fire.ca.gov/media/6687/fhsz_map15.pdf. Accessed August 5, 2021. CAL FIRE 2008

- California Department of Public Health (CDPH). 2017a. - *CDPH Urges Caution on How to Avoid Hantavirus following Diagnosis in Northern California Man*. Available: <https://www.cdph.ca.gov/Programs/OPA/Pages/NR17-059.aspx>. Accessed: October, 2019.
- California Department of Public Health (CDPH). 2017b. – *Hantavirus in California*. Available: <https://cdphdata.maps.arcgis.com/apps/MapSeries/index.html?appid=31fd0ca80e264cbd9bba7d54952194de>. Accessed: October, 2019.
- California Department of Public Health (CDPH). 2018. – *Vector-Borne Disease Section Annual Report 2018*.
- California Department of Public Health (CDPH). 2019a. *Facts about the Plague in California*. [online]: <https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/FactsAboutPlagueinCA.pdf>. Accessed February 28, 2018.
- California Department of Public Health (CDPH), 2019b. *Travel Associated w/ Dengue*
- CalGEM, 2020. *Well Finder Tool*.
- Kern County Department of Planning and Development Services, 1991, *Kern County and Incorporated Cities Hazardous Waste Management Plan*, Available at https://psbweb.co.kern.ca.us/planning/pdfs/haz_waste_mgt_plan.pdf Accessed August 11, 2021
- Kern County Department of Public Health (KCDPH), 2018a. – *Kern County Valley Fever Case Count and Rate*. Available: kerncountyvalleyfever.com/wp-content/uploads/2019/04/Kern-County-Valley-Fever-Case-Count-and-Rate-2008-2018.png. Accessed: October, 2019.
- Kern County Department of Public Health (KCDPH), 2018b. – *Kern County Valley Fever Cases by Region*. Available: kerncountyvalleyfever.com/wp-content/uploads/2019/04/Kern-County-Valley-Fever-Cases-by-Region-2008-2018.png. Accessed: October, 2019.
- Kern County Office of Emergency Services (KCOES), 2012, *Multi-Jurisdictional Hazard Mitigation Plan*, Updated 2020, Available at <https://mitigatehazards.com/county-of-kern/public-draft-hmp/> Accessed August 11, 2021
- Regional Water Quality Control Board (Water Board), 2016, 2017, 2018. *Geotracker Database*, <https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=drilldown&reportName=facilityAtAGlance&placeID=257874>, Accessed August 5, 2021.
- SoCalGas, 2020 – *Gas Transmission Pipeline Interactive Map tool*.
- UCSF Health, 2016. *West Nile Virus*. Available: <https://www.ucsfhealth.org/education/west-nile-virus>.
- Westnile, 2019 – *Latest West Nile Virus Activity in California*. Available: www.westnile.ca.gov. Accessed: October, 2019.

Hydrology

- California Department of Water Resources (DWR). 2006. *San Joaquin Valley Groundwater Basin Kern County Subbasin -California's Groundwater Bulletin 118*. Available at https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/5_022_14_KernCountySubbasin.pdf Accessed August 12, 2021

- California Regional Water Quality Control Board, 2005, *Water Discharge Requirements (WDR)*, Available at https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/kern/r5-2005-0077.pdf Accessed August 11, 2021
- Central Valley Regional Water Quality Control Board (RWQCB). 2018. *Central Valley Region Water Quality Control Plan*, 1994 revised 2018.
- Federal Emergency Management Agency (FEMA), 2020. - *FEMA Flood Map Service Center* – Available: <https://www.fema.gov/glossary/flood-zones> Accessed: August, 5 2021.
- Natural Resources Conservation Service (NRCS), 2020a. - *websoil survey, Calflax Loam*. Available: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx> Accessed: October 27, 2020.
- Natural Resources Conservation Service (NRCS), 2020b. - *websoil survey, Posochanet Silt Loam*. Available: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx> Accessed: October 27, 2020.
- United States Geologic Survey, (USGS), 2012. *Groundwater Quality in the Kern County Subbasin, California*. Available: <https://pubs.usgs.gov/fs/2011/3150/pdf/fs20113150.pdf>.
- Western Regional Climate Center (WRCC), 2020 – *Bakersfield 5 NW, POR – Daily Temperature Averages and Extremes*. Available: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0444> Accessed: October 27, 2020.

Land Use

- California Code of Regulation (CCR), 2021, *Chapter 3.1 Compostable Materials Handling Operations and Facilities Regulatory Requirements*, Available at [https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I558133D9B36C4A57972EBCA0C0EDFF38&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I558133D9B36C4A57972EBCA0C0EDFF38&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)) Accessed August 12, 2021
- CalRecycle, 2019. *Taft Recycling and Sanitary Landfill*. Available: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3895?siteID=709>. Accessed: November, 2020.
- Kern County Planning and Natural Resources Department, Various Dates. *Kern County General Plan*, last amended September 22, 2009. Available at: https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP_Complete.pdf
- Kern Council of Governments (COG), 2018. - *Regional Transportation Plan/Sustainable Communities Strategy*.

Mineral Resources

- Kern County Economic Development Corporation, 2021, *Five facts you might not know about Kern County*, Available at <https://www.aeraenergy.com/five-facts-you-might-not-know-about-kern-county-the-energy-capital-of-california/> Accessed September 15, 2021

Department of Conservation, 1999, *Guidelines for Classification and Designation of Mineral Lands*, Available at <https://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf> Accessed August 12, 2021

CalGEM, 2021, *Well Finder*, Available at <https://maps.conservation.ca.gov/doggr/wellfinder/#openModal> Accessed August 12, 2021

California Department of Conservation (CDOC), 2020, *Surface Mining and Reclamation Act of 1975*, Updated 2020, Available at <https://www.conservation.ca.gov/smgb/Regulations>, Accessed August 12, 2021

California Department of Conservation (CDOC), 2021, *Mineral Land Classification*, Available at <https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc> Accessed August, 12, 2021

South Kern Industrial Center (SKICP), 2002, *Specific Plan*, Available at <https://ceqanet.opr.ca.gov/Project/1991122017> Accessed August 12, 2021

Noise

Caltrans, 2013. *Transportation and Construction Vibration Guidance Manual*. September.

Federal Transit Administration (FTA), 2006. *Transit Noise and Vibration Impact Assessment*. Available at https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf Accessed August 12, 2021

Kern County, 2007, *Code of Ordinances Chapter 8.36 Noise Control*, Available at https://library.municode.com/ca/kern_county/codes/code_of_ordinances?nodeId=TIT8HESA_C H8.36NOCO Accessed August 12, 2021

Kern County (County), 2009. *Kern County General Plan, Noise Element*, Planning and Community Development Department last amended September 22, 2009. Available at: <https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGPChapter3.pdf>

United States Environmental Protection Agency (USEPA), 1974, *Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety*, Available at <https://www.rosemonteis.us/sites/default/files/references/usepa-1974.pdf> Accessed August 11, 2021

Project Description

California Department of Resources Recycling and Recovery (CalRecycle), 2018, *Biosolids: Organic Materials Management*, Available at <https://calrecycle.ca.gov/organics/biosolids> Accessed August 11, 2021

CalRecycle, 2018b, *Frequently Asked Questions*, Available at <https://www.calrecycle.ca.gov/recycle/commercial/organics/faq> Accessed August 11, 2021

State of California Department of Finance (DOF), 2020, *Estimates*, Available at <https://dof.ca.gov/Forecasting/Demographics/Estimates/> Accessed August 11, 2021

United States Geologic Survey, 2020. *U.S. Quaternary Faults* – Available:
<https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf> Accessed August 11, 2021

Public Services

California Department of Fire and Forestry (CALFIRE), 2007a. *Fire Hazard Severity Zones in SRA Map, Kern County*. Available at: https://osfm.fire.ca.gov/media/6687/fhszs_map15.pdf. Accessed August 5, 2021

California Department of Fire and Forestry (CALFIRE), 2007b. *Draft Fire Hazard Severity Zones in LRA Map, Kern County*. Available at: https://osfm.fire.ca.gov/media/6686/fhszl06_1_map15.pdf Accessed August 5, 2021

CAL FIRE, 2020. – *About Us*. Available: <https://www.fire.ca.gov/about-us/>. Accessed: October, 2020.

California Highway Patrol (CHP), 2020a. *Programs & Services*. Available:
<https://www.chp.ca.gov/programs-services>. Accessed October, 2020.

California Highway Patrol (CHP), 2020b. *Find an Office*. Available: <https://www.chp.ca.gov/find-an-office>. Accessed: October, 2020.

Kern County, 2019, *Code of Ordinances Chapter 17.32 Fire Code*, Adopted 2016, Available at
https://library.municode.com/ca/kern_county/codes/code_of_ordinances?nodeId=TIT17BUCO_CH17.32FICO Accessed August 12, 2021

Kern County Emergency Medical Services (EMS), 2020. *Contact Us*. Available at:
<https://kernpublichealth.com/ems-services-and-certification/>. Accessed October, 2020.

Kern County Parks and Recreation Department, 2010, *Parks and Recreation Master Plan Chapter 6 Capital Improvement Plan*, Adopted 2008, Available at
<https://www.kerncounty.com/home/showpublisheddocument/2148/637127126894370000>
Accessed August 12, 2021

Kern County Planning and Community Development Department, Various Dates. *Kern County General Plan*, last amended September 22, 2009. Available at:
https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP_Complete.pdf. Accessed August 5, 2021

Kern County Fire Department (KCFD), 2009. *Wildland Fire Management Plan*. Available at:
<http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf591.pdf>, accessed August 15, 2017.

Kern County Fire Department (KCFD), 2018, *Strategic Fire Plan*, Updated 2020, Available at
<https://osfm.fire.ca.gov/media/2ssfzgc/2020-krn-fire-plan.pdf> Accessed August, 12, 2021

Kern County Fire Department (KCFD), 2020. *Fire Stations*. Available: <https://kerncountyfire.org/about-kcfd/fire-stations/>. Accessed August, 5 2021

Kern County Fire Department (KCFD), 2020b. *Fire Chief's Message*. Available:
<https://kerncountyfire.org/about-kcfd/fire-chiefs-message/>. Accessed August 5, 2021

Kern County Sheriff's Office (KCSO), 2020. – *KCSO History*. Available:
<https://www.kernsheriff.org/History>. Accessed: October, 2020.

Traffic and Transportation

Kern Council of Governments, 2018. *2018 Regional Transportation Plan/Sustainable Communities Strategy*, August 16, 2018. Available online at: https://www.kerncog.org/wp-content/uploads/2018/10/2018_RTP.pdf. Accessed August 5, 2021

Ruettgers & Schuler Civil Engineers, 2019. *South Kern Compost Manufacturing Facility – Traffic Study*. March 2019.

Tribal Cultural Resources

Chartkoff, Joseph L., Architecture (California), in *The Archaeology of Prehistoric Native America: An Encyclopedia*, edited by G. Gibbon, pp. 27-28, Garland Publishing Company, New York, 1998.

Fagan, Brian, *Before California*, Rowman & Littlefield Publishers Inc., Lanham, MD, 2003.

Utilities and Service Systems

California Department of Water Resources (DWR). 2006. *San Joaquin Valley Groundwater Basin Kern County Subbasin. California's Groundwater Bulletin 118*

CalRecycle, 2019a. *Taft Recycling and Sanitary Landfill*. Available: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3895?siteID=709>. Accessed: November, 2020.

CalRecycle, 2019b. *Bakersfield Metropolitan (Bena) SLF*. Available: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3931?siteID=742>. Accessed: November, 2020.

CalRecycle, 2021, *Recycling and Disposal Facility Reporting (AB901)*, Available at <https://www.calrecycle.ca.gov/laws/rulemaking/archive/2019/ab901reporting> Accessed August 12, 2021

Kern County Public Works Department (KCPWD), 2020. – *About Us*. Available: <https://kernpublicworks.com/about-public-works/>. Accessed: October, 2020.

South Kern Industrial Center, 2020, *Operating Record -Water Use*

United States Geologic Survey, (USGS), 2012. *Groundwater Quality in the Kern County Subbasin, California*. Available: <https://pubs.usgs.gov/fs/2011/3150/pdf/fs20113150.pdf>.

Wildfire

California Code of Regulation, 2016, *California Fire Code Title 24 Part 9*, Available at <https://www.citymb.info/Home/ShowDocument?id=28089> Accessed August 12, 2021

California Department of Fire and Forestry (CALFIRE), 2007a. *Fire Hazard Severity Zones in SRA Map, Kern County*. Available at: https://osfm.fire.ca.gov/media/6687/fhszs_map15.pdf. Accessed August 5, 2021

California Department of Fire and Forestry (CALFIRE), 2007b. *Draft Fire Hazard Severity Zones in LRA Map, Kern County*. Available at https://osfm.fire.ca.gov/media/6686/fhszl06_1_map15.pdf. Accessed August 5, 2021

DataBasin, 2020. *California Fire Perimeters 1989-2019*. Available: <https://databasin.org/datasets/bf8db57ee6e0420c8ecce3c6395aceeb>. Accessed: December, 2020.

Kern County, 2019, *Code of Ordinance Title 17 Building and Construction*, Available at https://library.municode.com/ca/kern_county/codes/code_of_ordinances?nodeId=TIT17BUCO Accessed August 12, 2021

Kern County Fire Department (KCFD), 2009. *Wildland Fire Management Plan*. Available at: <http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf591.pdf>, accessed August 15, 2017.

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Chapter 11

Acronyms and Abbreviations

°F	Degrees Fahrenheit
µg/m ³	Micrograms per cubic meter
A	Exclusive Agriculture (Zoning District)
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ACM	Asbestos Containing Material
ADT	Average Daily Trips
ADDT	Annual Average Daily Trips
AF or ac-ft	Acre Feet
AFB	Air Force Base
AFY	Acre Feet Per Year
AGL	Above Ground Level
ALUCP	Airport Land Use Compatibility Plan
amsl	Above Mean Sea Level
ANSI	American National Standards Institute
ANSS	Advanced National Seismic System
APCD	Air Pollution Control District
APCO	Air Pollution Control Officer
API	Area of Potential Impacts
APN	Assessor Parcel Number
APS	Auxiliary Power System
APS	Alternative Planning Strategy
ATCM	Airborne Toxic Control Measure
AQAP	Air Quality Attainment Plan
AQI	Air quality index
AQMP	Air Quality Management Plan
ARB	Air Resources Board
AR4	Fourth Assessment Report
ATC	Authority to Construct
ATV	All-terrain vehicle
BAT	Best Available Technology Economically Achievable.

BAU	Business-as-Usual
BCT	Best Conventional Pollutant Control Technology
BFE	Base Flood Elevation
BGEPA	Bald and Golden Eagle Protection Act
bgs	Below Ground Surface
BIOS	Biogeographical Information and Observation System
BLM	Bureau of Land Management
BMP	Best Management Practice
BNSF	Burlington North Santa Fe
BP	Before Present
BPS	Best Performance Standards
BTEX	benzene, toluene, ethylbenzene, and xylenes
BUOW	Burrowing Owl
BWh	Dry-hot desert climate
BWhh	Dry-very hot desert
C°	Celsius
CA EDD	California Economic Development Department
CAA	(Federal) Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalARP	California Accidental Release Prevention Program
CalEEMod	California Emissions Estimator Model
Cal/EPA	California Environmental Protection Agency
Calflora	Calflora Occurrence Database
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen Code	California Green Building Standards Code
CASP	Covered Aerated Static Pile Composting System
CAILI	California Legislative Information
Cal NAGPRA	California Native American Graves Protection and Repatriation Act
OSHA	California Division of Occupational Safety and Health
CalRecycle	California Department of Resources Recycling and Recovery
CalTech	California Institute of Technology
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association

CAPs	Climate Action Plan
CARB	California Air Resources Board
CASGEM	California Statewide Groundwater Elevation Monitoring
CAAQS	California Ambient Air Quality Standards.
CBC	California Building Code
CBD	Central Business District
CBD	Center for Biological Diversity
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDC	Center for Disease Control and Prevention
CDCA	California Desert Conservation Act
CDFW	California Department of Fish and Wildlife
CDMG	California Division of Mines and Geology
CDNPA	California Desert Native Plants Act
CDOF	California Department of Finance
CDP	Census Designated Place
CDPH	California Department of Public Health
CDPR	California Department of Parks and Recreation
CdTe	CadmiumTeluride
CDWR	California Division of Water Resources
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
cf	Cubic Feet
CFCs	Chlorofluoro carbons
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH	Highway Commercial
CH ₄	Methane
CHHSA	California Health and Human Services Agency
CHL	California Historical Landmark
CHP	California Highway Patrol

CHRIS	California Historical Resources Information System
CIP	Capital Improvement Plan
CL	Cluster
CMA	Congestion Management Agency
CMP	Congestion Management Program
cm	Centimeter
cmbs	Centimeters Below Surface
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CNRADWR	Resources Agency Department of Water Resources
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COG	Council of Governments
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSA	County Service Area
CSC	California Species of Special Concern
CSD	Community Services District
CTC	California Transportation Commission
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CVC	California Vehicle Code
CVP	Central Valley Project
CWA	Clean Water Act
CWS	Community Water System
cy	Cubic Yards
dB	Decibel
dBA	A-Weighted Decibel Scale
DBCP	Dibromochloropropane
DEF	Diesel Exhaust Fluid

DMG	Division of Mines and Geology
DOC	California Department of Conservation
DOD	Department of Defense
DOE	U.S. Department of Energy
DOF	California Department of Finance
DOGGR	Division of Oil, Gas and Geothermal Resources
DOI	Department of Interior (United States)
DOSH	California Division of Occupational Health and Safety
DPH	Department of Public Health
DPM	Diesel Particulate Matter
DPR	Department of Pesticide Regulation
DRECP	Desert Renewable Energy Conservation Plan
DRO	Diesel Range Organics
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EDB	Ethylene Dibromide
EDD	Economic Development Department
EDR	Environmental Data Resource
EEE	Eastern Equine Encephalitis
EIA	U.S. Energy Information Administration
EIR	Environmental Impact Report
EKAPCD	Eastern Kern Air Pollution Control District
EMF	Electromagnetic Fields
EMS	Emergency Medical Services
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESL	Environmental Screening Level
ET	Evapotranspiration
EU	Excavation Unit
°F	Fahrenheit
FAA	Federal Aviation Administration
FBFM	Flood Boundary Floodway Map
FC	Floodplain Combining

FE	Federally Endangered
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIP	Federal Implementation Plan
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FIRM	Flood Insurance Rate Map
FPM	PFM: Protected Fur-bearing Mammal
FMMP	Farmland Mapping and Monitoring Program
FP	Flood Plain (Combining District)
FPM	Protected Fur-Bearing Mammal
FPP	Floodplain Primary
FPPA	Farmland Protection Policy Act
FPS	Floodplain Secondary
FR	Federal Regulation
FRA	Federal Responsibility Area
Ft	Feet
FT	Federally Threatened
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
G5	Global/State rank of common globally
GAMAQI	Guidance for Assessing and Mitigating Air Quality Impacts
GANDA	Garcia and Associates
General Permit	General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIS	Geographic Information System
GO	General Order
GPA	General Plan Amendment
GPS	Global Position System
GRO	Gasoline Range Organics
GSA	Groundwater Sustainability Agency

GSP	Groundwater Sustainability Plan
GVWR	Gross Vehicle Weight Rating
H ₂ O	Water
H ₂ S	Hydrogen Sulfide
HA	Hydrologic Area
HAPs	Hazardous air pollutants
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HDM	Highway Designed Manual
HFC	Hydrofluorocarbon
HHD	Heavy Heavy Duty
HI	Hazard Index
HMBP	Hazardous Material Business Plan
HPS	Hantavirus Pulmonary Syndrome
HRA	Health Risk Assessment
HVAC	Heating, Ventilation, and Air Conditioning
HWCA	Hazardous Waste Control Act
HWMP	Hazardous Waste Management Plan
Hz	Hertz
I-5	Interstate 5
IBC	International Building Code
ICS	International Commission on Stratigraphy
ID	Insufficient Data
IPCC	Intergovernmental Panel on Climate Change
IRWMP	Integrated Regional Water Management Plan
IS	Initial Study
ISDD	Intermediate Storm Design Discharge
ISO	Isolate
ISO	Independent System Operator
ITE	Institute of Transportation Engineers
ITP	Incidental Take Permit
IWMB	Integrated Waste Management Board
KCEHD	Kern County Environmental Health Department
KCEHSD	Kern County Environmental Health Services Department

KCFD	Kern County Fire Department
KCGP	Kern County General Plan
KCIWMP	Kern County Integrated Waste Management Plan
Kern COG	Kern Council of Governments
Sheriff's Office	Kern County Sheriff's Office
KCWA	Kern County Water Agency
KCWM	Kern County Waste Management
kg	Kilogram
KOP	Key Observation Point
KSF	Thousand Square Feet
kW	Kilowatts
KWB	Kern Water Bank
LACWWD	Los Angeles County Waterworks District
LAO	Legislative Analyst's Office
LHD	Light Heavy Duty
L_{dn}	Day – Night Average Sound Level
L_{eq}	Equivalent Sound Level
L_{max}	Maximum Sound Level
L_{min}	Minimum Sound Level
L_n	Percentile Noise Level
L_{24}	L_{eq} duration of 24 hours
L_{90}	Noise level exceeded during 90 percent of the measurement period
L_{10}	Noise level exceeded during 10 percent of the measurement period
LCFS	Low Carbon Fuel Standards
LEV	Low Emission Vehicle
LEHD	Longitudinal Employer Household Dynamics
LID	Low Impact Development
LOS	Level of Service
LRA	Local Responsibility Area
LRWQCB	Lahontan Regional Water Quality Control Board
PMF	Protected Fur Bearing Mammal
M-1	Light Industrial
M^2	Meter squared
MBTA	Migratory Bird Treaty Act

MCE	Maximum Credible Earthquake
MCL	Maximum Contaminant Level
MDAB	Mojave Desert Air Basin
mg	Milligrams
mg/L	Milligrams Per Litter
mg/m ³	Milligram Per Cubic Meter
mgd	Million Gallons per Day
MGS	Mohave ground squirrel
MHD	Medium Heavy Duty
MHMP	Multi-Hazard Mitigation Plan
mm	Millimeter
MMMP	Mitigation Measures Monitoring Program
MMTCO ₂ e	Million Metric Tons of Carbon Dioxide Equivalents
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
mpg	Miles per gallon
mph	Miles Per Hour
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MSA	Metropolitan Statistical Area
MTBE	Methyl Tertiary Butyl Ether
MTR	Military Training Route
MUTCD	Manual on Uniform Traffic Control Devices
Mv	Millivolts
MW	Megawatt
MWh	Megawatt-hour
MWELO	Model Water Efficiency Landscape Ordinance
MWD	Municipal Water District
N	North
N/A	Not Applicable
NAC	Noise Abatement Criteria
NAAQS	National Ambient Air Quality Standards

NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NAWS	Naval Air Weapons Station
NCCP	Natural Community Conservation Plan
NCP	National Contingency Plan
NCSL	National Conference of State Legislatures
ND	No data
NDC	Nationally Determined Contributions
NEES	Network for Earthquake Engineering Simulation
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NF ₃	Nitrogen Trifluoride
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NIEHS	National Institute of Environmental Health Sciences
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NMFS	National Marine Fisheries Service
NO ₂	Nitrogen Dioxide
N ₂ O	Nitrous oxides
NO _x	Oxides of Nitrogen
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPPA	Native Plant Protection Act
NPS	National Park Service
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSF	National Science Foundation
NSLU	Nosie-Sensitive Land Uses
NTIS	National Technical Information Service

NTSA	National Trails System Act
NWS	National Weather Service
NZE	Near Zero Emission
O ₃	Ozone
OAL	Office of Administrative Law
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OHV	Off-Highway Vehicle
OHW	Ordinary High Water
OHWM	Ordinary High Water Mark
OPR	Office of Planning and Research
OPS	Office of Pipeline Safety
OS	Open Space
OSFM	Office of the State Fire Marshall
OSHA	Occupational Safety and Health Administration
OTR	Over the road
OWYC	One Way Yield Control
P	Pro-Rata
Pb	Lead
PBSD	Performance Based Seismic Design
PCB	Polychlorinated Biphenyls
PCC	Portland Cement Concrete
PCT	Pacific Crest Trail
PD	Precise Development
PHF	Peak Hour Factors
PFC	Perfluorocarbon
PFM	Protected Fur-bearing Mammal
PG&E	Pacific Gas and Electric
pH	Potential Hydrogen
Phase I ESA	Phase I Environmental Site Assessment
PM	Particulate Matter
PM ₁₀	Particulate Matter 10 microns or less in diameter
PM _{2.5}	Post Meridian 2.5 microns or less in diameter

POCs	Pollutants of Concern
ppb	Parts per billion
ppd	Pounds Per Day
ppm	Parts per million
ppmv	parts per million by volume
PPV	Peak Particle Velocity
PRC	Public Resources Code
psi	Pounds per Square Inch
PV	Photovoltaic
PVC	Polyvinyl Chloride
PWD	Palmdale Water District
Qa	Quaternary Alluvium
QHWD	Quartz Hill Water District
Qvag	Quaternary younger alluvial grus
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
REL	Reference Exposure Level
RHNA	Regional Housing Needs Assessment
RMS	Root Mean Square
ROG	Reactive Organic Gases
ROV	Recreation Off-Highway Vehicles
ROW	Right of Way
RPS	Renewable Portfolio Standard
RTB	Rio Tinto Borates
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
S4	Secure within California with minimal threat
SAB	State Allocation Board
SANDAG	San Diego Association of Governments
SAR	Second Assessment Report
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SC	Scenic Corridor
SCAQMD	South Coast Air Quality Management District

SCE	Southern California Edison
SCGC	Southern California Gas Company
SCS	Sustainable Communities Strategy
SDWA	Safe Drinking Water Act
SE	State Endangered
SF ₆	Sulfur Hexafluoride
SFHA	Special Flood Hazard Areas
SGMA	Sustainable Groundwater Management Act
SHRC	State Historic Resources Commission
SHPO	State Historic Preservation Officer
SIL	Significant Impact Level
SIP	State Implementation Plan
SJKF	San Joaquin Kit Fox
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SKISCP	Southern Kern Industrial Center Specific Plan
SLCP	Short Lived Climate Pollutant
SLF	Sacred Lands File
SMARA	State Mining and Reclamation Act
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMBMI	San Manuel Band of Mission Indians
SMGB	State Mining and Geology Board
SoCAB	South Coast Air Basin
SOI	Sphere of Influence
SO ₂	Sulfur Dioxide
SO ₄ ²⁻ , SO ₃ or SO ₄	Sulfates
SO _x	Sulfur Oxides
SP	Special Planning
SPCC	Spill Prevention, Control, and Countermeasure
SPT	Standard Penetration Testing
SR-119	State Route-119
SR	State Rare
SRA	State Responsibility Area
SSC	State Species of Concern

SSJIC	Southern San Joaquin Information Center
SSJVIC	Southern San Joaquin Valley Information Center
SRA	State Responsibility Area
SVRA	State Vehicular Recreation Area
ST	State Threatened
STAA	Surface Transportation Assistance Act
STIP	State Transportation Improvement Program
SWMP	Solid Waste Management Plan
SWMP	Storm Water Management Plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
T	Project Trips
TAC	Toxic Air Contaminant
TAZ	Traffic Analysis Zone
T _B	General Plan Buildout Trips
TCM	Transportation Control Measures
TDF	Travel Demand Forecasting
TDS	Total Dissolved Solids
T _E	Existing Trips
TEPP	Transportation Emergency Preparedness Program
THPO	Tribal Historic Preservation Officer
TMDL	Total Maximum Daily Load
TPH	Total Petroleum Hydrocarbons
tpy	Tons Per Year
TWSC	Two Way Stop Control
UBC	Uniform Building Code
UFC	Uniform Fire Code
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
US Census Bureau	United States Census Bureau
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture

USDOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
U.S. Route-395	US-395
UST	Underground Storage Tank
UV	Ultraviolet
UWMP	Urban Water Management Plan
V/C	Volume-to-Capacity
VdB	Vibration Decibels
VOC	Volatile Organic Compound
VMT	Vehicle miles traveled
VRPs	Visibility-reducing particles
W	West
WEAP	Worker Environmental Awareness Program
WHO	World Health Organization
WMP	West Mojave Plan
WSA	Water Supply Assessment
wtpy	Wet tons of material per year
ZE/NZE	Zero-emission or near-zero-emission
ZEV	Zero-Emission Vehicle
ZV	Zone Variance

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