Final Environmental Impact Report

SCH# 2024041028

Volume 7

Chapter 7 – Response to Comments

BUTTONBUSH SOLAR AND STORAGE PROJECT

by 29SC 8me, LLC.

(PP24407)

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CUP No. 17, Map 98; CUP No. 19, Map 98;
CUP No. 25, Map 99; GPA No. 4, Map 98;
SPA No. 5, Map 98; GPA No. 8, Map 99;
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Site 8
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GPA No. 1, Map 54; GPA No. 13, Map 77;
Williamson Act Land Use Contract Cancellations

Kern County
Planning and Natural Resources Department
Bakersfield, CA

January 2026

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KERN COUNTY
Planning & Natural Resources

Craig M. Murphy, Director
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2323
Phone: (661) 862-8600
TTY Relay 1-800-735-2929
Email: planning@kerncounty.com
Web Address: https://kernplanning.com

January 30, 2026

FILE: GPAs, SPAs, CUPs, WALUCs, FSZC, and NSV
Map No. 54, 77, 78, 98, 99, 100
S.D. # 4 - Couch

To: Commenting Agencies and Interested Persons (See Attached Mailing List)

RE: Response to Comments for the Draft Environmental Impact Report – Buttonbush Solar and Storage Project by 29SC 8me, LLC. (PP24407)

Dear Agency or Interested Party:

This is to advise that the Kern County Planning and Natural Resources Department has prepared a document entitled Volume 7 – Chapter 7 – Response to Comments and Volume 8 – Chapter 7 – Response to Comments Appendix (N through P) for the above referenced proposed project. Section 15088 of the California Environmental Quality Act (CEQA) Guidelines requires the Lead Agency to evaluate comments on environmental issues received from persons who reviewed the Draft Environmental Impact Report (EIR) and prepared written responses addressing each comment. This document has been posted with the Kern County Clerk and provided to commenting agencies and interested parties by mail at least 10 days prior to the scheduled Planning Commission Hearing.

As noted previously, this document is Chapter 7 of the Draft EIR and is available for review at the Planning and Natural Resources Department, which is located at 2700 "M" Street, Suite 100, Bakersfield, CA 93301 or on the Department website at: **https://kernplanning.com/environmental-doc/buttonbush-solar-project/**

A public hearing has been scheduled with the Kern County Planning Commission to consider the proposed project on February 12th, 2026 at 7:00 p.m., or soon thereafter, at the Chambers of the Board of Supervisors, First Floor, Kern County Administrative Center, 1115 Truxtun Avenue, Bakersfield, California 93301.

Thank you for your participation in the environmental process for this proposed project. Should you have any questions regarding this proposed project, please do not hesitate to contact me at (661) 862-5010 or via email at **Fosterja@kerncounty.com**.

Sincerely,

Jack Foster
Planner II – Advanced Planning Division
Kern County Planning and Natural Resources Department

Commenting Agencies and Interested Persons: California Department of Fish and Wildlife; State Dept of Conservation Geologic Energy Management Division; San Joaquin Valley Air Pollution Control District; Kern County Public Works Department Building & Development Review; Kern County Public Works Department Building & Development Survey; Kern County Fire Department; Kern County Public Health Services Department – Environmental Health Division; Kern County Superintendent of Schools; Western State Regional Council of Carpenters/Mitchell M. Tsai Law Firm; Defenders of Wildlife/California Native Plant Society; Sierra Club – Kern Kaweah Chapter; Pacific Gas & Electric Company; Twenty-Nine Palms Band of Mission Indians; Southern California Gas; Semitropic Water Storage District; Shafter-Wasco Irrigation District; Rosedale Rio Bravo Water Storage District; Sill Properties Inc.; Portwood Farms; Parsons Farms; Jay Kroeker; Alan Bittleston; Tom Toretta; Brian Romanini; John Romanini Mark Romanini; Perry Tjaarda; Starrh and Starrh Cotton Growers, LP; Fred Palla Farms; Affentranger Ranches; Affentranger Brothers;

Affentranger Farms, LLC.; Cauzza Growers; Farmers Cooperative Gin, Inc.; IBEW Local 428; LiUNA Local 220; The Interational Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers Iron Workers Local Union 155; Ironworkers Local Union 433; California League of United Latin American Citizens Council 3272; Kern, Inyo, Mono Counties Building and Construction Trades Council.; California Department of Transportation-District 6 Office; Cauzza Ranches LLC

Buttonbush Solar and Storage Project
Response to Comments

Kern County Public Works Department
Building & Development
Development Review
Attn: Cesar Ayon

Kern County Public Works Department
Building & Development
Survey
Attn: Jeremy Brock

Sill Properties Inc.
Attn: Bret Sill
1508 18th Street, Suite 320
Bakersfield, CA 93301

Farmers Cooperative Gin, Inc.
Attn: Adriane Carbonel
2531 Wasco Way
Buttonwillow, CA 93206

Shafter-Wasco Irrigation District
Attn: Kris Lawrence
PO Box 1168
Wasco, CA 93280

Western States Regional Council of Carpenters
C/O Mitchell M. Tsai Law Firm
139 South Hudson Ave, Suite 200
Pasadena, CA 91101

Alan Bittleston
7210 Meadowbrook Lane
Bakersfield, CA 93309

Defenders of Wildlife
Attn: Sophia Markowska
P.O. Box 401
Folsom, CA 95763

Tom Toretta
3111 Mirasol Ave
Buttonwillow, CA 93206

California Department of Fish & Wildlife
Attn: Julie Vance
1234 East Shaw Avenue
Fresno, CA 93710

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

Kern County
Env Health Services Department
Attn: Dayana Torres

Rosedale-Rio Bravo Water Storage District
Attn: Dan Bartel
849 Allen Road
Bakersfield, CA 93314

Parsons Farms
Attn: Julien Parsons
400 Buttonwillow Drive
Buttonwillow, CA 93206

IBEW Local 428
Attn: Brian Holt
3921 Sillect Avenue
Bakersfield, CA 93308

Pacific Gas and Electric Company
Attn: Danielle Wilson
980 9th Street, Suite 1200
Sacramento, CA

Twenty-Nine Palms Band of Mission Indians
Attn: Nicolas Garza
46-200 Harrison Place
Coachella, CA 92236

California Native Plant Society
Attn: Brendan Wilce
2707 K Street, Suite 1
Sacramento, CA 95816

Ironworkers Local 433
Attn: Rene Palacios
17495 Hurley Street
Industry, CA 91744

State Dept of Conservation
Geologic Energy Management Division
Attn: Emilio Flores
11000 River Run Boulevard
Bakersfield, CA 93311

Kern County Fire Dept
Attn: Kaylee Schoenheide

San Joaquin Valley
Air Pollution Control District
Attn: Mark Montelongo
1990 East Gettysburg Avenue
Fresno, CA 93726

California League of United Latin American Citizens
Attn: Rick Garcia
PO Box 21173
Bakersfield, CA 93390

Jay Kroeker
PO Box 1537
Shafter, CA 93263

Semitropic Water Storage District
Attn: Jason Gianquinto
1101 Central Avenue, PO Box 8043
Wasco, CA 93280

Portwood Farms
Attn: Philip Portwood
17176 Griffith Ave.
Wasco, CA 93280

The International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers Iron Workers Local Union
155 Attn: Jesus Castaneda
5407 E. Olive, Suite 106
Fresno, CA 93727

Sierra Club- Kern Kaweah Chapter
Attn: Gordon L. Nipp, PH.D.
PO Box 3357
Bakersfield, CA 93385

Kern, Inyo, Mono Counties Building and Construction Trades Council
Attn: Alissa Reed
PO Box 1197
Bakersfield, CA 93302

Brian Romanini
PO Box 786
Buttonwillow, CA 93206

John Romanini
PO Box 786
Buttonwillow, CA 93206

Mark Romanini
PO Box 786
Buttonwillow, CA 93206

LiUNA! Local 220
Attn: Hertz Ramirez
6800 District Blvd
Bakersfield, CA 93313

SoCal Gas
Transmission Technical Services Department
Attn: Nerses Papazyan
9400 Oakdale Avenue
Chatsworth, CA 91311

Fred Palla Farms
Attn: Mark Palla
327 Corn Camp Road
Buttonwillow, CA 93206

Starrh & Starrh Cotton Growers, LP
Attn: Carol Starrh Kroeker, Partner
29985 Fresno Avenue
P.O. Box 1537
Shafter, CA 93263

Affentranger Ranches
Attn: Rosemarie Millan
18107 Kratzmeyer Road
Bakersfield, CA 93314

Affentranger Brothers
Attn: Franz Affentranger
18107 Kratzmeyer Road
Bakersfield, CA 93314

Affentranger Farms, LLC
Attn: Franz Affenranger
18107 Kratzmeyer Road
Bakersfield, CA 93314

Cauzza Growers
Attn: Jacob M. Cauzza/Matthew A. Cauza/Lucas A. Cauzza
1600 Corn Camp Road
Buttonwillow, CA 93206

Perry Tjaarda
19087 Magnolia Ave.
Shafter, CA 93263

California Department of Transportation-District 6 Office
Attn: David Padilla
1352 West Olive Avenue
Fresno, CA 93778

Cauza Ranches LLC
Attn: Michael A. Cauzza
1600 Corn Camp Road
Buttonwillow, CA 93206

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 # 2024041028

Project Title: Buttonbush Solar and Storage Project by 29SC 8me, LLC.

Lead Agency: Kern County Planning and Natural Resources Department — Contact Person: Jack Foster

Mailing Address: 2700 "M" Street, Suite 100 — Phone: (661) 862-5010

City: Bakersfield — Zip: 93301 — County: Kern

Project Location: County: Kern — City/Nearest Community: Buttonwillow, Bakersfield, Shafter, Wasco

Cross Streets: See Below — Zip Code: 93249/ 93280/ 93206/ 93263/ 93314

Lat. / Long. : See Below — Total Acres: 11,983

Assessor's Parcel No.: Multi — Section: Multi — Township: Multi — Range: Multi — Base: MDB&M

Within 2 Miles: State Hwy #: I-5 and SR 58 — Waterways: N/A

Airports: N/A — Railways: Union Pacific Railroad — Schools: Buttonwillow Elementary

Document Type:

CEQA: ☐ NOP ☐ Early Cons ☐ Neg Dec ☐ Mit Neg Dec ☐ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.) ☐ Other Ch. 7 – Response to Comments/ FEIR

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other

Local Action Type:

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

Development Type:

☐ Residential: Units ____ Acres ____
☐ Office: Sq.ft. ____ Acres ____ Employees ____
☐ Commercial: Sq.ft. ____ Acres ____ Employees ____
☐ Industrial: Sq.ft. ____ Acres ____ Employees ____
☐ Educational ____
☐ Recreational ____

☐ Water Facilities: Type ____ MGD ____
☐ Transportation: Type ____
☐ Mining: Mineral ____
☒ Power: Type Solar PV MW 2,000
☐ Waste Treatment: Type ____ MGD ____
☐ Hazardous Waste: Type ____
☒ Other: Battery Energy Storage Systems (BESS) 16,000 MWh/ 16 GWh

Project Issues Discussed in Document:

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

Present Land Use / Zoning / General Plan Designation

Agricultural Land / A (Exclusive Agriculture) / Various General Plan Designations

Project Description

The proposed Buttonbush Solar and Storage Project as proposed by 29SC 8me, LLC. would allow for the construction and operation of a photovoltaic (PV) solar facility with the associated infrastructure on 7 proposed project sites that would collectively generate up to 2,000 megawatts (MW) or 2 gigawatts (GW) of renewable electrical energy including a battery energy storage system (BESS) with the capacity of storing approximately 16,000 megawatt-hours (MWh) or 16 gigawatt-hours (GWh) on approximately 11,983 acres across 128 privately owned parcels in an unincorporated area of northwestern Kern County. Implementation of the proposed project includes requests for multiple General and Specific Plan Amendments (GPAs/SPAs), Conditional Use Permits (CUPs), the cancellation of Williamson Act Land Use and Farmland Security Zone Contracts (WALUC/FSZC), and Non-Summary Street Vacations (NSV) from the Kern County Planning & Natural Resources Department. The several separate sites of the proposed Project are entirely located within unincorporated Kern County, directly north of the community of Buttonwillow, approximately four miles west of the City of Bakersfield, two miles west of the City of Shafter, and seven miles southwest of the City of Wasco. The proposed Project straddles and crosses Interstate 5 (I-5) and is east of Buttonwillow Raceway Park, north of State Route (SR) 58, and south of Kimberlina Road.

Cross Streets

Site 1: Wasco Way and Sullivan Road

Site 2: Seventh Standard and Buttonwillow Drive

Site 3: Seventh Standard and North Corn Camp Road

Site 4: Rowlee Road and Burbank Street

Site 5: Brandt Road and Sullivan Road

Site 6: Seventh Standard and Magnolia Ave

Site 8: Rowlee Road and Lerdo Hwy

Lat. / Long

Site 1: 35.42336, -119.44934

Site 2: 35.44527, -119.49277

Site 3: 35.46435, -119.51071

Site 4: 35.46659, -119.48178

Site 5: 35.42121, -119.35420

Site 6: 35.46037, 119.36347

Site 8: 35.52215, -119.47882

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**".

__X__	Air Resources Board	_____	Office of Emergency Services
_____	Boating & Waterways, Department of	_____	Office of Historic Preservation
_____	California Highway Patrol	_____	Office of Public School Construction
_____	CalFire	_____	Parks & Recreation
__X__	Caltrans District # __6__	_____	Pesticide Regulation, Department of
_____	Caltrans Division of Aeronautics	_____	Public Utilities Commission
_____	Caltrans Planning (Headquarters)	_____	Regional WQCB # _____
_____	Central Valley Flood Protection Board	_____	Resources Agency
_____	Coachella Valley Mountains Conservancy	_____	S.F. Bay Conservation & Development Commission
_____	Coastal Commission	_____	San Gabriel & Lower L.A. Rivers and Mtns Conservancy
_____	Colorado River Board	_____	San Joaquin River Conservancy
__X__	Conservation, Department of	_____	Santa Monica Mountains Conservancy
_____	Corrections, Department of	_____	State Lands Commission
_____	Delta Protection Commission	_____	SWRCB: Clean Water Grants
_____	Education, Department of	_____	SWRCB: Water Quality
_____	Energy Commission	_____	SWRCB: Water Rights
__X__	Fish & Game Region # Fresno	_____	Tahoe Regional Planning Agency
_____	Food & Agriculture, Department of	_____	Toxic Substances Control, Department of
_____	General Services, Department of	_____	Water Resources, Department of
_____	Health Services, Department of		
_____	Housing & Community Development	_____	Other _____
_____	Integrated Waste Management Board	_____	Other _____
_____	Native American Heritage Commission		

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

Starting Date January 30, 2026 Ending Date February 12, 2026

Lead Agency (Complete if applicable):

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

Applicant: _____
Address: _____
City/State/Zip: _____
Phone _____

Signature of Lead Agency Representative: _____ 01/30/2026

Jack Foster, Planner II

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Final Environmental Impact Report

SCH# 2024041028

Volume 7

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Kern County
Planning and Natural Resources Department
Bakersfield, CA

January 2026

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Acronyms and Abbreviations

§	Section
°C	degrees Celsius
°F	degrees Fahrenheit
AAQA	Ambient air quality analysis
AB	Assembly Bill
AC	Alternating current
ACBM	asbestos-containing building materials
ACHP	Advisory Council on Historic Preservation
AD	Anno Domini
ADT	Average daily traffic
AF	acre-feet
AFY	acre-feet per year
ALUCP	Airport Land Use Compatibility Plan
AMSL	above mean sea level
ANSI	American National Standards Institute
APCD	Air Pollution Control District
APCO	Air Pollution Control Officer
API	Area of Potential Impact
APLIC	Avian Power Line Interaction Committee
APN	Assessor's Parcel Number
ATC	Authority to Construct
ATCM	Airborne Toxic Control Measures
ATP	Active Transportation Plan
AWMP	Agricultural Water Management Plan
BAU	business as usual

BCWD	Buttonwillow County Water District
BESS	Battery Energy Storage Systems
bgs	below ground surface
BLM	Bureau of Land Management
BMP	Best management practice
BPS	Best performance standards
BVWSD	Buena Vista Water Storage District
C&D	construction and demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAD	computer aided design
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalARP	California Accidental Release Prevention Program
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalGEM	California Geologic Energy Management Division
CalGREEN	State of California Green Building Code Requirements
CalOES	California Office of Emergency Services
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAN	Clean Air Now
CAO	County Administrative Office
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board

CASQA	California Stormwater Quality Association
CBC	California Building Code
CCAA	California Clean Air Act
CCAP	Climate Change Action Plan
CCR	California Code Regulations
CCS	Crypto-crystalline silicate
CDC	Center for Disease Control
CDFG	California Department of Fish and Game (currently California Department of Fish and Wildlife)
CDFW	California Department of Fish and Wildlife
CdTe	cadmium telluride
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERS	California Environmental Reporting System
CFC	California Fire Code
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CGC	California Government Code
CGS	California Geological Survey
CH_4	methane
CHL	California Historical Landmarks
CHP	California Highway Patrol
CHR	California Historical Resources
CHRIS	California Historical Resources Information System
CIC	Cumulative Impact Charge

CIP	Capital Improvement Program
CISN	California Integrated Seismic Network
CIWMB	California Integrated Waste Management Board
CMA	Congestion Management Agency
CMP	Congestion management program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNLM	Center for Natural Lands Management
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CREC	Controlled Recognized Environmental Condition
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSLC	California State Lands Commission
CSP	concentrated solar power
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CVC	California Vehicle Code
CWA	Clean Water Act
CWC	California Water Code
CWPP	Community Wildfire Protection Plan
DAC	disadvantaged community

DAC	direct air capture
dB	decibel
dBA	A-Weighted Sound Level
DEIR	Draft Environmental Impact Report
DMA	Development Mitigation Agreement
DMR	Division of Mine Reclamation
DNL	day-night level
DOC	Department of Conservation
DOGGR	California Division of Oil, Gas, and Geothermal Resources
DOSH	California Division of Occupational Safety and Health
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
DWQ	Division of Water Quality
DWR	Department of Water Resources
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EMF	electromagnetic field
EMS	Emergency Medical Services
EO	Executive Order
EPA	Environmental Protection Agency
EPC	Engineering, procurement, and construction contractor
EPCA	Energy Policy and Conservation Act
EPS	Emissions Performance Standard
ERC	Emission Reduction Credits
ESA	Environmental Site Assessment

ESS	Energy storage systems
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
Fire Code	Kern County Code of Building Regulations
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FONSI	Finding of No Significant Impact
FP	fueling positions
FPPA	Farmland Protection Policy Act
FR	Federal Register
FRA	Federal Railroad Administration
FSZ	Farmland Security Zone
FTA	Federal Transit Administration
FTE	Full-time equivalent
FTIP	Federal Transportation Improvement Program
GAMAQI	Guidance for Assessing and Mitigating Air Quality Impacts
GHG	greenhouse gas
GIS	Geographic Information System
GLC	Ground-level concentration
GO	General Order
GPA	General Plan Amendment
GPS	Global Positioning System
GSP	Groundwater Sustainability Plan
GW	gigawatt

GWh	gigawatt hour
GWP	Global warming potential
HAP	hazardous air pollutant
HCM	Highway Capacity Manual
HEIMP	PG&E comprehensive management plan
HFC	hydrofluorocarbons
HMBP	Hazardous Materials Business Plan
HMIS	Hazardous Materials Inventory Statement
HMMP	Hazardous Materials Management Plan
HMRRP	Hazardous Materials Release Response Plan and Inventory
HMTA	Hazardous Materials Transportation Act
HRA	Health Risk Assessment
HREC	Historical Recognized Environmental Condition
HRRS	Health-Risk Reduction Strategy
HSC	Health and Safety Code
HSG	Hydrological Soil Groups
HUC	Hydrological Unit Code
HVAC	heating, ventilation, and air-conditioning systems
HWMP	Hazardous Waste Management Plan
Hz	Hertz
I-5	Interstate 5
ICRMP	Integrated Cultural Resources Management Plan
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IFC	International Fire Code
IGY	International Geophysical Year

IPCC	Intergovernmental Panel on Climate Change
ips	inches per second
IRWM	Integrated Regional Water Management
IRWMP	Integrated Regional Water Management Plan
IS	Initial Study
ISR	Indirect Source Rule
ITE	Institute of Transportation Engineers
ITP	Incidental Take Permit
KCAR	Kern County Assessor-Recorder Office
KCFD	Kern County Fire Department
KCGP	Kern County General Plan
KCPNRD	Kern County Planning and Natural Resources Department
KCSO	Kern County Sheriff's Office
KCWA	Kern County Water Agency
KCZO	Kern County Zoning Ordinance
Kern COG	Kern County Council of Governments
KGA	Kern Groundwater Authority
KOP	Key Observation Point
KSCO	Kern County Sheriff's Office
kV	kilovolt
kWh	kilowatt hour
LACM	National History Museum of Los Angeles
LCFS	Low Carbon Fuel Standard
LCI	Land Use and Climate Innovation
Ldn	Day/Night Noise Level
Leq	Equivalent Noise Level

Lmax	Maximum Noise Level
LOS	Level of Service
LRA	Local Responsibility Area
LRRP	Landscape Revegetation and Restoration Plan
LST	Lattice steel towers
Lw	Sound Power Level
MBTA	Migratory Bird Treaty Act
MHMP	Multi-hazard mitigation plan
mm	millimeter
MM	Mitigation Measure
MMT	million metric ton
MP	megapixel
mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan planning organizations
MRZ	Mineral Resource Zone
MT	Metric ton
MW	megawatt
MWh	megawatt-hour
MY CO_2e	metric tons of carbon dioxide equivalent
N_2O_3	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NB	northbound
NCCP	Natural Communities Conservation Plan

NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEHRP	National Earthquake Hazards Reduction Program
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NLR	Noise Level Reduction
NMFS	National Marine Fisheries Service
No.	Number
NO_2	nitrogen dioxide
NOAA	National Oceanic Atmospheric Administration
NOC	Notice of Completion
NOI	Notice of Intent
NOP	Notice of Preparation
NOP/IS	Notice of Preparation/Initial Study
NOx	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NPMS	National Pipeline Mapping System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSB	National Scenic Byways
NSR	New Source Review

O&M	Operations and maintenance
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OHV	off-highway vehicle
OPR	Office of Planning and Research
OSFM	Office of the State Fire Marshal
OSHA	Occupational Safety and Health Administration
P.L.	Public Law
PA	participating agency
PAH	polycyclic aromatic hydrocarbons
Pb	lead
PCE	passenger car equivalence
PCS	Power Converter Stations
PEER	Permit-Exempt Equipment Registration
PERC	tetrachloroethylene
PFC	perfluorocarbons
PG&E	Pacific Gas and Electric Company
PHMSA	Pipeline and Hazardous Materials Safety Administration
PI	Plasticity index
PM	particulate matter
$PM_{0.1}$	ultrafine particles
$PM_{2.5}$	Fine Particulate Matter
PM_{10}	respirable particulate matter
Porter-Cologne	Porter-Cologne Water Quality Control Act

PPA	Power Purchase Agreement
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PSD	Prevention of Significant Deterioration
psi	pounds per square inch
PTO	Permit to Operate
PV	photovoltaic
PVC	polyvinyl chloride
RBOB	reformulated blendstock for oxygenate blending
RCC	Regional Climate Center
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act of 1976
REC	Recognized Environmental Concern
RFS	renewable fuel standards
RMP	Risk Management Program
RMS	root mean square
ROG	reactive organic gases
ROW	Right-of-way
RPS	Renewable Portfolio Standard
RRBWSD	Rosedale-Rio Bravo Water Storage District
RSPA	Research and Special Provisions Administration
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWMG	Regional Water Management Group

RWQCB	Regional Water Quality Control Board
SAFE-1	Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SC	Scenic Corridor
SCE	Southern California Edison
SCIC	Supplemental Cumulative Impact Charge
SCS	Sustainable Communities Strategy
SDWA	Safe Drinking Water Act of 1974
SEIA	Solar Energy Industry Association
SEL or SENEL	Sound Exposure Level or Single Event Noise Exposure Level
SF_6	Sulfur Hexafluoride
SFHA	Special flood hazard areas
SGMA	Sustainable Groundwater Management Act
SHPO	State Historic Preservation Officer
SHRC	State Historical Resources Commission
SIL	Significant impact level
ISO	International Organization of Standardization
SIP	State Implementation Plans
SJPC	San Joaquin Power Company
SJV	San Joaquin Valley
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLCP	Short-lived Climate Pollutants
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act of 1975

SMGB	State Mining and Geology Board
SO_2	sulfur dioxide
SOx	sulfur oxides
sp.	species
SPA	Specific Plan Amendment
SPCC	Spill, Prevention, Control, and Countermeasure
SR	State Route
SRA	State Responsibility Area
SRR	Santa Rosa Rancheria
SSC	species of special concern
SSJVIC	Southern San Joaquin Valley Information Center
State	State of California
STC	Sound Transmission Class
STIP	State Transportation Improvement Program
SVP	Society of Vertebrate Paleontology
SWDA	Safe Water Drinking Act
SWP	State Water Project
SWRCB	State Water Resources Control Board
SWSD	Semitropic Water Storage District
TAC	toxic air contaminants
TAZ	Traffic Analysis Zone
TDM	Transportation Demand Management
TDS	total dissolved solid
TIS	Transportation Impact Study
TMDL	total maximum daily loads
TMP	Traffic Management Plan

TOD	transit-oriented development
tpy	tons per year
TSP	Tubular steel poles
UBC	Uniform Building Code
UFC	Uniform Fire Code
UIC	Underground Injection Control
UL	Underwriters Laboratory
Unified Program	unified hazardous waste and hazardous materials management
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USDW	Underground source of drinking water
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USPS	United States Postal Service
USSEIA	United States Solar Energy Industry Association
UST	Underground Storage Tank
UV	ultraviolet
UWMP	Urban Water Management Plan
V/C	volume-to-capacity ratio
VERA	Voluntary Emission Reduction Agreement
VMT	vehicle miles traveled
VOC	volatile organic compounds
VRM	Visual Resource Management

WAC	Williamson Act Contract
WALUC	Williamson Act Land Use Contracts
WALUCC	Williamson Act Land Use Contract Cancellation
WDR	waste discharge requirement
WEAP	Worker Environmental Awareness Program
WKWD	West Kern Water District
WOTUS	Waters of the United States
WRCC	Western Regional Climate Center
WSA	Water Supply Assessment
WWTP	Wastewater Treatment Plant
ZEV	zero-emission vehicle

Chapter 7

Response to Comments

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Chapter7
Response to Comments

7.1 Introduction

7.1.1 Purpose

As defined by Section 15050 of the California Environmental Quality Act (CEQA) Guidelines, the Kern County Planning and Natural Resources Department is serving as "Lead Agency" for preparation of the Final Environmental Impact Report (EIR) for the Buttonbush Solar and Storage Project (proposed Project) proposed by 29SC 8me LLC (Project proponent). The Final EIR presents the environmental information and analyses that have been prepared for the proposed Project, including comments received addressing the adequacy of the Draft EIR, and responses to those comments. The Draft EIR was circulated for a 45-day public review period (November 18, 2025, through January 2, 2026). All comments have been included and responses provided. In addition to the responses to comments, clarifications, corrections, and revisions have been made to the Draft EIR and are included in this chapter. The Final EIR, which includes responses to comments, the Draft EIR, and the Mitigation Monitoring Program, will be used by the Board of Supervisors in the decision-making process for the proposed Project.

7.1.2 Public Process

Kern County prepared and circulated an Initial Study (IS)/Notice of Preparation (NOP) to applicable responsible agencies, trustee agencies, and local agencies, as well as other interested parties, for review and comment beginning on April 24, 2024, and ending on May 24, 2024. The County received seven letters with substantive comments in response to the IS/NOP. In conjunction with this public notice, Kern County hosted a scoping meeting on May 15, 2024, at the Kern County Planning and Natural Resources Department, located at 2700 "M" Street, Suite 100, Bakersfield, California. The purpose of the meeting was to introduce the proposed Project and to solicit input from agencies, organizations, and other interested parties regarding the proposed Project, alternatives, mitigation measures, and environmental impacts to be analyzed in the EIR. Comments received during the 30-day review period were used in the preparation of the Draft EIR. During the May 15, 2024, scoping meeting, no members of the public were present, and no testimony was given. The IS/NOP, scoping meeting, and community workshop materials, the seven comment letters received, and a complete summary of all scoping comments are included as Appendix A of the Draft EIR.

A Draft EIR was prepared, incorporating public and agency responses to the IS/NOP and the scoping process. The Draft EIR was circulated to appropriate agencies for review and comment and to additional individuals and interest groups who have requested to be notified of EIR projects. Per Section 15105 of the CEQA Guidelines, the Draft EIR was subject to a 45-day public review period (November 18, 2025, through January 2, 2026).

7.1.3 Revisions to the Draft EIR

The following section includes a listing of all errata/revisions made to the text of the Draft EIR. Amended text is identified by page number. Additions to the Draft EIR text are shown with underline, and text removed from the Draft EIR is shown with ~~strikethrough~~. The errata/revisions, as outlined below, fall within the scope of the original project analysis included in the Draft EIR and do not result in an increase to any identified impacts or produce any new impacts. No new significant environmental impacts would result from the changes. Therefore, no significant revisions have been made that would require recirculation of the Draft EIR pursuant to CEQA Guidelines Section 15088.5 (Recirculation of an EIR Prior to Certification).

Chapter 1, Executive Summary, Page 1-5

WALUCC No. 24-34 by Bonnie & David ~~Davie~~ Bloemhof LLC et al, on behalf of 29SC 8me LLC, for the cancellation of approximately 160 acres of a Land Use Contract (Recorded in Book 5737, page 2231).

Chapter 1, Executive Summary, Page 1-6

WALUCC No. 24-30 by ~~Houchin~~ Wallace & Janice Houchin Family Trust, et al, on behalf of 29SC 8me LLC, for the cancellation of approximately 160 acres of a Land Use Contract (Recorded in Book 4771, page 47).

Chapter 1, Executive Summary, Page 1-12

WALUCC No. 24-19 by M&C Romanini Family LP, B&E Romanini Investments LP and Romanini Family LP, on behalf of 29SC 8me LLC, for the cancellation of approximately 287 acres of a Land Use Contract (Recorded in Book 4370, page 306).

Chapter 1, Executive Summary, Page 1-31

In addition to substation modifications, PG&E would install up to 2,000 feet of new 500 kV single circuit transmission line, creating a new, direct tie from Midway Substation to the Point of Change of Ownership for the proposed Project. Up to four, approximately 175-foot-tall, lattice steel towers or tubular steel poles would support the proposed transmission line. Concrete foundations would support the towers based on the designed loads. Portions of the gen-tie line and collector lines may be undergrounded to avoid conflict with other existing infrastructure. PG&E may change the elevation of existing overhead lines to accommodate gen-tie crossings.

Chapter 1, Executive Summary, Page 1-49

Because the No Project Alternative cannot be the Environmentally Superior Alternative under CEQA, the Environmentally Superior Alternative is considered to be Alternative 4 ~~2~~, the No Ground-Mounted Utility-Solar Development Alternative. Compared to the proposed Project, the No Ground-Mounted Utility-Solar Development Alternative would result in less impacts related to aesthetics, agriculture, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, public services, transportation, tribal cultural resources, utilities and service systems, and wildfires.

Chapter 1, Executive Summary, Page 1-55 et seq.

Table 1-1: Draft EIR Impacts, Mitigation Measures, and Level of Impacts After Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.1 Aesthetics and Visual Resources …			
Impact 4.1-3: Would the Project, which is located in a rural area, substantially degrade the existing visual character or quality of public views (that is, views that are experienced from publicly accessible vantage points) of the site and its surroundings?	Potentially significant	… **MM 4.1-4:** Wherever possible, within the proposed project boundary native vegetation shall remain undisturbed unless mowing is necessary for placement of the project components. All native vegetation adjacent to the proposed project boundary shall remain in place. Prior to the commencement of project operations and decommissioning, the project proponent/operator shall submit a Landscape Revegetation and Restoration Plan (LLRP) for the project site to the Kern County Planning and Natural Resources Department for review and approval. The plan shall include the measures detailed below. a. In areas temporarily disturbed during construction and decommissioning (including grading or removal of root balls resulting in loose soil), the ground surface shall be restored to an appropriate vegetation type as determined by a certified Professional, such as biologist(s), landscape architect(s), horticulturist(s), or botanist(s), that will compose the LRRP. ~~revegetated with a native seed mix or native plants and/or allowed to re-vegetate with the existing native seed bank in the topsoil where possible to establish revegetation~~ The vegetation type determined by the certified professional shall be communicated to the Kern County Planning and Natural Resources Department for approval prior to completing the LRRP. Areas that contain permanent features such as perimeter roads, maintenance roads, BESS yards and substation/ switchyard areas, O&M facilities and/or under arrays do not require revegetation. b. The plan must include but is not limited to: (1) the approved vegetation type ~~California native seed mix~~ that will be used on-site, (2) a timeline for implementation of site revegetation seeding the site, (3) the details of which areas are to be revegetated, and (4) a clear prohibition of the use of toxic rodenticides. c Ground cover shall include planting ~~native seed mix and shall be spread~~ where earth-moving activities have taken place, as needed to establish revegetation. The revegetation type ~~seed mix or native plants~~ shall be determined through consultation with professionals such as landscape architect(s), horticulturist(s), botanist(s), etc. with local knowledge as shown on submitted resume and shall be approved by the Kern County Planning and Natural Resources Department prior to planting. Phased revegetation ~~seeding~~ may be used if a phased construction approach is used (i.e., the entire site need not be revegetated ~~seeded~~ all at the same time). d. Vegetation/ground cover shall be continuously maintained on the site by the project operator. e. The revegetation and restoration of the site shall include a monitoring program, as deemed necessary by the certified professional producing the LRRP. A proposed monitoring program shall be submitted to Kern County Planning and Natural Resources Department for approval prior to completion of the LRRP. ~~be monitored annually for a three-year period following restoration activities that occur post-construction and post-decommissioning. Based on annual monitoring visits during the three-year period, an annual evaluation report shall be submitted to the Kern County Planning and Natural Resources Department for each of the three years. Should a 75% coverage rate not be feasible through consultation with a qualified botanist, evidence of such shall be submitted to Kern County Planning and Natural Resources Department and an appropriate coverage rate shall be established. The three-year monitoring program is intended to ensure the site achieves native plant diversity, establishes perennials, and is consistent with conditions prior to implementation of the proposed project, where feasible.~~ …	Significant and unavoidable
4.4 Biological Resources			
Impact 4.4-1: Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Potentially significant	… **MM 4.4-3:** During construction and decommissioning of the Project site, the Project proponent and/or contractor(s) shall implement the following general avoidance and protective measures: … c. Access roads that are planned for use during construction activities shall not extend beyond the planned impact area, which area includes all previously disturbed lands and any location within the project fence line not delineated for avoidance of sensitive biological resources. Where new access routes are required, the route will be clearly marked prior to construction. Access roads will avoid impacts to special-status plant occurrences, if feasible. d. The project proponent/operator shall minimize the areas of disturbance. Parking areas, new roads, staging, storage, excavation, and disposal site locations shall be confined to the smallest areas possible. These areas shall be demarcated, and disturbance activities, vehicles, and equipment shall be confined to these areas. Parking areas will be located to avoid impacts to special-status plant occurrences, if feasible. …	Less than significant

Table 1-1: Draft EIR Impacts, Mitigation Measures, and Level of Impacts After Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		i. Workers shall be prohibited from bringing pets and firearms to the project site and from feeding wildlife. To the extent feasible, nighttime construction-related activity shall be minimized, but if work must be conducted at night ~~If night work occurs on the project site~~, the speed limit will be 10 miles per hour. … **MM 4.4-4:** Prior to the start of ground-disturbance activities or decommissioning of the main project site, a qualified biologist knowledgeable on the identification of rare plant species shall conduct a pre-construction plant survey of areas of proposed disturbance within the main project site and a 100-foot buffer (where legally accessible) timed during the appropriate blooming period of the target species (all special-status plants with potential to occur at the project ~~March to May for Kern mallow, and February to April for alkali-sink goldfields~~) prior to start of construction activities in this area to determine if any special status plant species are present. If special-status plants are not identified during the survey(s), no further action is required. If special-status plants are identified on-site, their locations shall be mapped and Ecologically Sensitive Area (ESA) fencing should be established at a 50-foot radius around these individuals to ensure that they are not destroyed during project construction activities. ~~Pursuant to Section 1913(c) of the California Fish and Game Code, if~~ If project activities cannot avoid direct impacts to special-status plants, CDFW shall be notified and provided the opportunity to salvage any of these plants that would be affected. CDFW may enter into agreement with the project proponent to retain a qualified entity for the relocation of sensitive plants to an approved location. Any salvage would be undertaken in accordance with a salvage plan to be developed in consultation with CDFW. The plan would include methods for transplanting and watering (if appropriate), success criteria for salvaged plants, monitoring the health and survivorship of salvaged plants during at least 5 years following salvage, and contingency measures if plant survivorship requirements are not satisfied. If State endangered, threatened, or rare plants, or plants protected as candidate for State listing, are identified during special-status plant surveys, the Project proponent shall consult with CDFW. If take cannot be avoided, then the Project would be required to obtain an ITP from CDFW prior to implementing any Project activities that would cause take. Prior to initiating ground-disturbing activities during the construction and decommissioning phases of the Project in areas mapped as occupied by Kern mallow, after seeds have set (usually by May 31) remove and stockpile the uppermost 3-6 inches of topsoil. The stockpiled soil shall not be exposed to moisture that could trigger the germination of seed prior to redistribution. The stockpiled material shall be spread in the affected area, the closest comparable area, or the closest suitable habitat outside the footprint of roads, buildings, and structures prior to the next blooming season. During the operational phase of the Project, vegetation and/or fuel management activities within Kern mallow occupied habitat shall be undertaken subsequent to after seeds of Kern mallow have set (usually by May 31). The project proponent shall mitigate for impacted occupied Kern mallow habitat. Compensatory mitigation land shall be provided at a ratio of 1:1 acre on-site or at a nearby location with comparable habitat value. Individual Kern mallow plants and/or seeds will be salvaged from the project site and translocated to the compensatory mitigation lands if authorized by appropriate wildlife agency. Final total compensation land acres will be based on final site plan design and confirmation through the required pre-construction biological surveys. Mitigation land may be nested with other lands established as compensatory mitigation for other resources, provided it meets the necessary biological requirements and as determined by appropriate wildlife agency. Prior to issuance of any building or grading permit, the project proponent shall (i) complete acquisition of such compensatory mitigation lands or equivalent mitigation credits applicable to the portion of the project covered by said grading or building permit; or (ii) provide a bond, letter of credit or other form of financial assurance acceptable to the County in an equivalent amount and acquire such lands or credits within eighteen (18) months of issuance of said building or grading permit. … **MM 4.4-8:** A pre-construction survey for Crotch's bumble bee shall occur within the project areas where suitable habitat has been identified during the primary flight period for workers and males (March 1 through June 30) prior to the start of project activities. The survey shall ensure that no nests for Crotch's bumble bee are located within the project areas. Crotch's bumble bee is a habitat generalist, ground-nesting bee. Surveys and other relevant recommendations shall be in accordance with the Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023) or with the most recent protocol available at the time of the surveys. If thatched/bunch grasses ~~nest resources~~ occupied by Crotch's bumble bee are detected within the project areas, no ground-disturbing activities shall occur within 50 ~~100~~ feet ~~of the occupied nest resources,~~ or as determined by a qualified biologist through evaluation of topographic features or distribution of floral resources. The thatched/bunch grasses ~~nest resources~~ shall be avoided for the duration of the Crotch's bumble bee nesting period (February 1 through October 31). Outside of the nesting season, it is assumed that no live individuals would be present within the nest, because the daughter queens (gynes) usually leave by September, and all other individuals (original queen, workers, males) die. The gynes are highly mobile and can independently disperse to outside the project footprint to the proposed open space or other suitable areas beyond that have suitable hibernaculum resources. Because construction will have occurred in the area outside the occupied nesting resources, no suitable habitat will be present in the impact area, and it is assumed that new queens will disperse to habitat outside the project areas. If Crotch's bumble bee nests have been detected and ground-disturbing activities will occur during the overwintering period (October through February), the Project proponent shall consult with CDFW to discuss how to implement Project activities and avoid take.	

Table 1-1: Draft EIR Impacts, Mitigation Measures, and Level of Impacts After Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		If take cannot be avoided, take authorization prior to any ground-disturbing activities is warranted if the species remains a candidate or becomes listed under CESA. Take authorization would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code section 2081(b). ... **MM 4.4-10:** Prior to the initiation of ground-disturbing activities, a pre-construction survey to determine if potential breeding resources occur for western spadefoot (for example, temporary puddles, stock ponds, slow-moving water courses) shall be performed prior to the rainy season before start of project activities. The following requirements ~~(Items a through e)~~ shall be implemented if the project area or its immediate vicinity is determined to contain suitable habitat for the western spadefoot. If no potential habitat for western spadefoot is found during the survey, no further mitigation is required. a. If potentially suitable breeding areas for western spadefoot are identified, a qualified biologist will conduct focused surveys for western spadefoot within all portions of the p~~P~~roject site containing suitable breeding habitat. Survey methods shall be similar to U.S. Fish and Wildlife Service California tiger salamander survey guidelines. A minimum of three rounds of surveys shall be completed in the appropriate season, and a survey report detailing survey results shall be prepared and submitted to the Kern County Planning and Natural Resources Department. ~~a 1,500-foot survey buffer, by locked construction fencing appropriate for amphibian exclusion, shall be installed around the project areas and breeding area. A pre-activity daytime and nighttime pond check and pre-activity nighttime surveys for western spadefoot shall be conducted the winter prior to ground-disturbing activities within the project areas. Surveys for spadefoot will begin during or the night after the first three significant rain (≥ 0.25 inches) events, as early as October or November, though peak breeding season typically occurs February through April. Surveys for spadefoot eggs and tadpoles can be done during the day and do not require nighttime surveys.~~ ~~b. Daytime surveys will be conducted by walking slowly along pool margins visually searching for (but not disturbing) eggs, larvae, and juveniles. Spadefoot may breed in a variety of ephemeral and perennial habitats from side pools of large rivers to road ruts.~~ ~~c. Nighttime surveys will occur between one hour after dusk and midnight and should be timed either during a rain event or the night after a rain event. Nighttime surveys (assuming eggs, larvae, and/or juveniles have not been detected) will be conducted by walking slowly and carefully along water features and between and through suspected breeding and upland habitats.~~ ~~d.~~ b. Where occupied breeding habitat is present, ~~T~~ transect-based nocturnal eyeshine surveys shall be conducted ~~for~~ in adjacent upland habitat ~~nighttime surveys~~. These are performed through adjacent upland habitat within 1,500 feet of occupied breeding locations or known occupied areas, using an approximate 30-meter transect width (less if there is denser grass and/or shrubs). Surveys must be conducted as silently as possible, because talking or other human-generated noises may cause western spadefoots to stop calling, hide, or leave the area. The surveyor shall rotate 360 degrees approximately every 200–300 meters (within the limits of their headlamp) and look backward along their transect with more frequency as the toads may watch the surveyor as they pass. Strong headlights or flashlights held at surveyor eye level should be used to visually locate and identify adult western spadefoots, and flash photography may be used to document sightings of solitary individuals. ~~e.~~ c. If western spadefoot is detected during surveys, ~~defined in Item a through d,~~ within the p~~P~~roject footprint, construction work should be conducted during the dry season (late fall to early spring) to avoid impacts to active breeding pools during the mating season (December through May) to the extent feasible. Where work must occur adjacent to occupied western spadefoot habitat, wildlife exclusion measures approved by CDFW shall be utilized to minimize take of western spadefoot in the vicinity of construction activities. If occupied burrows are found, a 50-foot no-disturbance buffer shall be observed around any western spadefoot burrow to the extent feasible. ~~then biologists shall collect western spadefoot adults for relocation.~~ d. If avoidance is not feasible, ~~A~~adults shall be relocated outside the p~~P~~roject footprint to portions of open space that have suitable breeding habitat and appropriate upland habitat, are of suitable size to support the translocated individuals, and contain few or no western spadefoot individuals. A relocation plan shall be prepared and approved by the wildlife agencies and lead agency prior to implementation. The plan shall include details regarding specifically how the western spadefoot will be captured, held, moved, and released; where they will be released; what data will be collected regarding the released individuals; timing; reporting; and other important factors. Relocation of western spadefoot shall follow the latest amphibian handling guidelines provided by the USGS. It is advisable to also capture and release other native herpetofauna that are found. Implementation of this may require a Memorandum of Understanding and/or Scientific Collecting Permit from CDFW and, if listed under the ESA, a Section 10 take permit from USFWS. ~~f.~~ e. If no western spadefoot are detected as a result of the surveys, then the fenced buffer may be removed. **MM 4.4-11:** Within one calendar year of the start of ground-disturbance activities, a qualified biologist shall conduct protocol-level surveys for the Blunt-Nosed Leopard Lizard (BNLL) to determine the potential for occupancy by BNLL. The required surveys shall be provided to the Kern County Planning and Natural Resources Department, the U.S Fish and Wildlife Service and the California Department of Fish and Wildlife. If no sign of the species is identified, no further action is required. If the species is identified on-site, the project proponent shall confer with the appropriate wildlife agency. Surveys may be conducted in areas of disturbance and needed buffers as work progresses or in stages as needed during the construction phase. If surveys indicate that BNLL and appropriate burrow habitat are absent, the construction area(s) can be fenced using materials and installing temporary wildlife exclusion fencing in compliance with agency specifications to prevent potential occupancy of BNLL in active construction areas. If BNLL are found within the survey areas, measures	

Table 1-1: Draft EIR Impacts, Mitigation Measures, and Level of Impacts After Mitigation

<table>
<tr><th>Impact</th><th>Level of Significance before Mitigation</th><th>Mitigation Measures</th><th>Level of Significance after Mitigation</th></tr>
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to protect the species shall include appropriate signage, monitoring by approved qualified biologists and consultation with the USFWS and the CDFW to develop a BNLL avoidance plan. If burrows are found to be occupied and take authorization has not been obtained from the wildlife agencies, ~~measures for avoidance and minimization of impact to BNLL shall be written in compliance with recommendations provided during agency consultations and shall contain project specific details~~ project activities shall be paused to allow BNLL to passively leave the work area of its own volition. Project activities may resume once the BNLL has traveled a safe distance away from the work area per the discretion of the qualified biologist. If the BNLL is observed to enter a burrow, a 50-foot ground-disturbance avoidance buffer would be erected. If ground-disturbing activities shall take place within the 50-foot buffer a qualified biologist will monitor the activity. The qualified biologist will evaluate the site conditions, such as soil hardness and activity impact, and determine if the activities can take place without any impacts to BNLL. If eggs are discovered, CDFW shall be contacted within 24 hours for further guidance.

Project actions in areas where BNLL are located shall be restricted to the species active period (April to early November) to ensure that no aestivating BNLL in burrows are impacted while in their burrows. In conjunction with CDFW or other involved agencies, sensitive areas shall be established and protected with appropriate signage. If take cannot be avoided, the project proponent shall confer with the appropriate wildlife agency and obtain an Incidental Take Permit pursuant to both Section 10(a)(1) of the federal Endangered Species Act and SB 147.

…

MM 4.4-13: Burrowing Owl Burrow Setbacks. Occupied burrowing owl burrows shall not be disturbed during the species nesting season (February 1 through August 31). The following distances shall be maintained between all disturbance areas and active burrowing owl nesting sites on site unless an Incidental Take Permit (ITP) is obtained that allows for buffer reductions, or a qualified biologist determines a reduced buffer would be adequate to avoid disturbing the owls. If reduced buffers are established, a qualified biologist shall monitor owl behavior and shall increase buffer distance if the owls should show signs of disturbance or distress.
<table>
<tr><td colspan="3">Time of Year</td></tr>
<tr><td>April 1–Aug 15</td><td>Aug 16–Oct 15</td><td>Oct 16–Mar 31</td></tr>
<tr><td colspan="3">Project Impact Level</td></tr>
<tr><td colspan="3">Low</td></tr>
<tr><td>656 feet (200 meters)</td><td>656 feet (200 meters)</td><td>164 feet (50 meters)</td></tr>
<tr><td colspan="3">Medium</td></tr>
<tr><td>1,640 feet (500 meters)</td><td>656 feet (200 meters)</td><td>328 feet (100 meters)</td></tr>
<tr><td colspan="3">High</td></tr>
<tr><td>1,640 feet (500 meters)</td><td>1,640 feet (500 meters)</td><td>1,640 feet (500 meters)</td></tr>
</table>
If active burrowing owl avoidance is infeasible, then the Project proponent shall consult with CDFW regarding potential for project activities to result in take of burrowing owl and shall comply with all avoidance, minimization, and compensatory mitigation requirements set forth in any ITP issued for the project by CDFW authorizing take of the species.

Burrowing owls present in proposed disturbance areas or within 500 feet or as specified under an ITP (as identified during pre-construction surveys) outside of the breeding season (between September 1 and January 31) may be moved away from the disturbance area using passive relocation techniques approved by CDFW. Passive relocation techniques in the CDFW's Staff Report on Burrowing Owl Mitigation Guidelines (CDFG 2012) include installing one-way doors in burrow entrances for 48 hours, to ensure the owl(s) have left the burrow, daily monitoring during the passive relocation period, and collapsing existing burrows to prevent reoccupation. A minimum of one or more weeks will be required to relocate the owl(s) and allow for acclimatization to alternate off-site burrows. Prior to burrow exclusion or eviction, the Project proponent shall prepare a burrowing owl relocation ~~management~~ plan ~~for CDFW's review and approval.~~ which shall include, at a minimum:
• Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species before burrow scoping;
• Type of scope to be used and appropriate timing of scoping to avoid impacts;
• Occupancy factors to look for and what shall 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);
</td><td></td></tr>
</table>

- How the burrow(s) shall 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 no owls reside inside the burrow);
- Removal of other potential owl burrow surrogates or refugia on site; and
- Photographing the excavation and closure of the burrow to demonstrate success and sufficiency.

Destruction of burrows shall occur only pursuant to the relocation plan; ~~a CDFW-approved management plan for the species;~~ burrow excavation shall be conducted by hand whenever possible.

~~As an alternative to passive relocation, occupied burrows identified off-site within 500 feet of Project activities may be buffered with hay bales, fencing (for example, sheltering in place), or as directed by the qualified biologist (and CDFW if the species remains protected under CESA), to avoid disturbance of burrows.~~ The provisions of an ITP, if obtained, shall supersede the work restrictions in this measure.

…

MM 4.4-16 Within 14 days prior to the start of project ground-disturbing activities, a pre-construction ~~pre-activity~~ survey with a 500-foot buffer where land access is permitted shall be conducted by a qualified biologist knowledgeable in the identification of these species and approved by CDFW. Surveys need not be conducted for all areas at one time; they may be phased so that surveys occur within 14 days of the portion of the project site that will be disturbed. If dens/burrows that could support any of these species are discovered during the pre-activity survey, the avoidance buffers outlined below shall be established. No work shall occur within these buffers unless the biologist approves and monitors the activity.

~~**Burrowing Owl (Active Burrows)**~~

~~Nonbreeding season (September 1–January 31): 160 feet~~

~~Breeding season (February 1–August 31): 250 feet~~

American Badger/San Joaquin Kit Fox

Potential or atypical den: 50 feet

Known den: 100 feet

Natal or pupping den: 500 feet, unless otherwise specified by CDFW and/or USFWS

In determining whether San Joaquin kit fox activity could occur within these buffers, the biological monitor would take into account the following:

- Noise level and duration. The noise level and duration of activities would be considered. Loud (e.g., greater than 80 decibels) and sustained (e.g., longer than one hour) activities would be disallowed within the buffer setbacks. Activities with shorter durations and/or lower noise levels may be considered with continual observation of the den by the monitor and work stoppage if the biologist detects evidence of disturbance.
- Level of disturbance typically experienced in the location of the den prior to construction. Some areas of the proposed Project (e.g., existing roads or agricultural areas) have been historically subject to human disturbance and dens near these areas are assumed to be accustomed to those previous levels of disturbance. If construction noise and duration are similar to disturbances that would have occurred in the area prior to construction (e.g., vehicular traffic on an existing road), those activities could continue with ongoing monitoring of the den by a biological monitor.
- If construction activities have begun within 100 feet of a potential or atypical den that was determined during preconstruction activities to be inactive when construction began and the den becomes active during construction (i.e., becomes a "known" den), those activities would be allowed to continue at the same intensity as occurred when the den became active. A biological monitor would maintain continual watch on the den while construction activities are conducted within the buffer described above.
- In no case would construction activities, regardless of noise and duration, occur closer than 50 feet from a known or potential/atypical den or 500 feet from a natal/pupping den unless approved by California Department of Fish and Wildlife or United States Fish and Wildlife Service. Evidence that the construction activities were causing negative changes in behavior patterns would cause the biologist to disallow those activities inside the buffer.

~~If burrowing owls are detected, a Burrowing Owl Management and Relocation Plan shall be prepared by a qualified biologist and reviewed by, and implemented in consultation with, CDFW. Unless otherwise approved by CDFW, disturbance to occupied burrows shall be avoided. Disturbance to suitably sized burrows (>11 cm wide) shall be avoided during the breeding season (February 1 through August 31) unless proven to be unoccupied. Buffers shall be established around occupied burrows in accordance with guidance provided in CDFG's Staff Report on Burrowing Owl Mitigation (CDFG 2012, or most recent guidance). No Project activities shall be allowed to encroach into established buffers without the notification to CDFW. The buffer shall remain in place until it is determined that occupied burrows have been vacated.~~

~~Outside of the nesting season (September 1 through January 31), passive owl relocation techniques as outlined in the Burrowing Owl Management and Relocation Plan shall be implemented with notification to CDFW.~~

As directed above, if the buffers cannot be implemented, the project proponent will confer with CDFW/USFWS for guidance on appropriate take avoidance measures. If impacts to ~~burrowing owl or~~ San Joaquin kit fox cannot be feasibly avoided, the project proponent will confer with CDFW/USFWS to determine if

Table 1-1: Draft EIR Impacts, Mitigation Measures, and Level of Impacts After Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		take authorization from CDFW/USFWS through the CESA and/or ESA ITP process or other agency-approved method is recommended. ~~If recommended, the ITP or other agency-approved permit shall provide suitable a~~Avoidance and minimization measures set forth in any ITP or other agency-approved permit issued for the project in addition to those set forth in this mitigation measure shall also be implemented. ~~to reduce potential impacts, and adequate mitigation.~~ Mitigation of occupied habitat at a ratio to be determined in consultation with the appropriate agencies may be through on- or off-site preservation with permanent protection and long-term funding, or through purchase of equivalent credits through a mitigation bank if available in addition to implementing all other measures and conditions of the permit. … **MM 4.4-21:** Mapped CDFW-designated sensitive communities should be avoided to the maximum extent possible. Any CDFW-designated sensitive communities that are directly and permanently impacted shall be mitigated at a ratio of 2:1 acre on-site ~~or at a nearby location~~ at another location in the same ecoregion with comparable habitat value. Potential mitigation sites will be analyzed to identify the opportunity with the greatest chance for restoration success while minimizing the risk and uncertainty of the mitigation outcomes. An evaluation of mitigation sites includes but is not limited to: an evaluation of hydrology, soil stability, grading requirements (import/export), and existing on-site vegetation (native and non-native) communities. An evaluation of vegetation will follow CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018) and California Natural Communities List (CDFW 2023), also referred to as the Natural Communities List, based on A Manual of California Vegetation, Online Edition (CNPS 2023). Prior to the issuance of a grading permit for construction and decommissioning activities, if full avoidance of the three CDFW-designated sensitive vegetation communities is not feasible, direct impacts shall be mitigated as follows: • Direct permanent impacts on up to 192.5 acres of bush seepweed scrub shall be mitigated at a 2:1 ratio (up to 385.0 acres, depending on final impacts) • Direct permanent impacts on up to 0.2 acres of spinescale scrub shall be mitigated at a 2:1 ratio (up to 0.4 acres, depending on final impacts) • Direct permanent impacts on up to 12.3 acres of tar plant fields shall be mitigated at a 2:1 ratio (up to 24.6 acres, depending on final impacts) Impacts shall be mitigated through one or more of the following as determined through consultation with the Kern County Planning and Natural Resources Department: preservation, restoration, enhancement, or establishment/re-establishment. … **MM 4.4-26:** Prior to the issuance of building and grading permits for Site 6, the project proponent/operator shall mitigate for the loss of Swainson's Hawk foraging habitat for portions of the project site within one mile of an active nest at a 0.5:1 ratio for a total of 605 acres. Mitigation lands may be nested with other compensatory lands provided it meets the necessary biological requirements and as determined by the appropriate wildlife agency. Total compensatory lands may be updated based on any future protocol-level survey and in consultation with the appropriate wildlife agency. **MM 4.4-27:** Prior to the issuance of building and grading permits for Site 8, the project proponent/operator shall mitigate for the loss of Swainson's Hawk foraging habitat for portions of the project site within one mile of an active nest at a 0.5:1 ratio for a total of 603 acres. Mitigation lands may be nested with other compensatory lands provided it meets the necessary biological requirements and as determined by the appropriate wildlife agency. Total compensatory lands may be updated based on any future protocol-level survey and in consultation with the appropriate wildlife agency. …	
4.5 Cultural Resources			
Impact 4.5-1: Would the Project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	Potentially significant	… **MM 4.5-2:** Prior to the issuance of any grading or building permit, the project proponent shall submit to the Kern County Planning and Natural Resources Department a Cultural Resources Treatment Plan. The plan shall: a. Require that prior to conducting initial ground disturbance in the vicinity of prehistoric archaeological sites, and in coordination with the Lead Archaeologist and Native American Monitor(s), exclusion areas (i.e., the recorded boundaries of the archaeological sites and all areas within 50 feet thereof) shall be temporarily marked with exclusion markers or protective fencing as determined by the Lead Archaeologist in consultation with the Native American Monitor. b. Previously evaluated archaeological sites and isolates that have been determined not eligible under CEQA for the California Register of Historical Resources will not be included in the exclusion areas. c. ~~b.~~ Require that the construction zone shall be narrowed or otherwise altered to avoid any exclusion areas. d. ~~c.~~ Provide an overview of best management practices to be utilized during ground-disturbing construction activities to ensure protection of cultural resources. e. ~~d.~~ Outline the process for evaluation of any unanticipated cultural discoveries during project construction activities. f. ~~e.~~ Provide a Data Recovery Plan, if required, prepared by the Lead Archeologist in consultation with the Native American Monitor(s), for the recovery of known and unanticipated cultural discoveries that cannot be avoided or preserved in place. …	Less than significant

Table 1-1: Draft EIR Impacts, Mitigation Measures, and Level of Impacts After Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.17 Utilities and Service Systems			
Impact 4.17-1: Would the Project 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?	Potentially significant	Implement Mitigation Measures MM 4.10-1 (See Section 4.10, *Hydrology and Water Quality*) **MM 4.17-1:** Prior to the issuance of a building permit for an O&M building that includes facilities the use of which will generate wastewater requiring sanitary disposal (e.g., restrooms), the method of sewage disposal shall be as required and approved by the Kern County Public Health Services Department. Compliance with this requirement will necessitate that the project proponent obtain the necessary approvals for the design of the septic system from the Kern County Engineering, Surveying and Permit Services Department. The septic system disposal field shall be located a minimum of 100 feet from a classified stream, or 25 feet from a non-classified stream as defined in the Kern County Onsite Systems Manual (Kern County 2016), and shall not be located where it would impact State wetlands or special-status plant species. …	Less than significant

Chapter 3, Project Description, Page 3-25

WALUCC No. 24-34 by Bonnie & David ~~Davie~~ Bloemhof LLC et al, on behalf of 29SC 8me LLC, for the cancellation of approximately 160 acres of a Land Use Contract (Recorded in Book 5737, page 2231).

Chapter 3, Project Description, Page 3-26

WALUCC No. 24-30 by ~~Houchin~~ Wallace & Janice Houchin Family Trust, et al, on behalf of 29SC 8me LLC, for the cancellation of approximately 160 acres of a Land Use Contract (Recorded in Book 4771, page 47).

Chapter 3, Project Description, Page 3-32

WALUCC 24-19 by M&C Romanini Family LP, B&E Romanini Investments LP and Romanini Family LP ~~and Romanini Family LP~~, on behalf of 29SC 8me LLC, for the cancellation of approximately 287 acres of a Land Use Contract (Recorded in Book 4370, page 306)

Chapter 3, Project Description, Page 3-65
Table 3-4, Site 3

24-30 Wallace and Janice Houchin Family Trust, et al. ~~Houchin Wallace & Janice Family Trust,~~ Book 4771 Page 47

Chapter 3, Project Description, Page 3-67
Table 3-4, Site 8

24-19 M&C Romanini Family LP, B&E Romanini Investments LP, and Romanini Family LP Book 4370 Page 306

Chapter 3, Project Description, Page 3-97

In addition to substation modifications, PG&E would install up to 2,000 feet of new 500 kV single-circuit transmission line, creating a new, direct tie from Midway Substation to the Point of Change of Ownership for the proposed Project. Up to four approximately 175-foot-tall lattice steel towers (LST) or tubular steel poles (TSPs) would support the proposed transmission line. Concrete foundations would support the towers based on the designed loads. PG&E may change the elevation of existing overhead lines to accommodate gen-tie crossings.

Chapter 3, Project Description, Page 3-100
3.6.2 Energy Transport
Generation Transmission Line

Power would be transmitted from the proposed substation(s) to the PG&E Midway Substation via up to 500 kV, overhead and/or underground gen-tie line(s). The preferred and alternative gen-tie alignments are shown in Figure 3-3: Project Aerial.

Gen-tie alternatives would be sized at up to 500 kV and up to 15 miles in length. Gen-tie alternatives generally would originate from proposed development areas, cross I-5, and route to the southern area of the Project site and then south to the existing PG&E's Midway Substation. The collector lines would be located generally within or adjacent to the Project site and may connect several parcels to a Project substation. Both collector lines and gen-tie alternatives would use up to a 200-foot-wide corridor. No construction or other Project activities would take place within an Ecological Reserve. The collector lines from the proposed parcel cluster to the main proposed substation would likely be sized at a voltage ranging from 34.5kV to 500 kV, with 34.5kV and 230 kV being likely voltages. Final heights and structure types are subject to change pending final engineering. The proposed Project would require redundant telecommunication connections. The primary telecommunication line would consist of fiber-optic cable lines necessary to support the on-site telecommunication equipment. Lines would be located on the same structures used to support the gen-tie line and/or buried.

Chapter 4, Environmental Setting, Impacts, and Mitigation Measures
Section 4.1, Aesthetics and Visual Resources, Page 4.1-44

MM 4.1-4: Wherever possible, within the proposed project boundary native vegetation shall remain undisturbed unless mowing is necessary for placement of the project components. All native vegetation adjacent to the proposed project boundary shall remain in place. Prior to the commencement of project operations and decommissioning, the project proponent/operator shall submit a Landscape Revegetation and Restoration Plan (LRRP) for the project site to the Kern County Planning and Natural Resources Department for review and approval. The plan shall include the measures detailed below.

a. In areas temporarily disturbed during construction and decommissioning (including grading or removal of root balls resulting in loose soil), the ground surface shall be restored to an appropriate vegetation type as determined by a certified Professional, such as biologist(s), landscape architect(s), horticulturist(s), or botanist(s), that will compose the LRRP. ~~revegetated with a native seed mix or native plants and/or allowed to re-vegetate with the existing native seed bank in the topsoil where possible to establish revegetation~~ The vegetation type determined by the certified professional shall be communicated to the Kern County Planning and Natural Resources Department for approval prior to completing the LRRP. Areas that contain permanent features such as perimeter roads, maintenance roads, BESS yards and substation/ switchyard areas, O&M facilities and/or under arrays do not require revegetation.

b. The plan must include but is not limited to: (1) the approved vegetation type ~~California native seed mix~~ that will be used on-site, (2) a timeline for implementation of site revegetation seeding the site, (3) the details of which areas are to be revegetated, and (4) a clear prohibition of the use of toxic rodenticides.

c. Ground cover shall include planting ~~native seed mix and shall be spread~~ where earth-moving activities have taken place, as needed to establish revegetation. The revegetation type ~~seed mix or native plants~~ shall be determined through consultation with professionals such as landscape architect(s), horticulturist(s), botanist(s), etc. with local knowledge as shown on submitted resume and shall be approved by the Kern County Planning and Natural Resources Department prior to planting. Phased revegetation ~~seeding~~ may be used if a phased construction approach is used (i.e., the entire site need not be revegetated ~~seeded~~ all at the same time).

d. Vegetation/ground cover shall be continuously maintained on the site by the project operator.

e. The revegetation and restoration of the site shall include a monitoring program, as deemed necessary by the certified professional producing the LRRP. A proposed monitoring program shall be submitted to Kern County Planning and Natural Resources Department for approval prior to completion of the LRRP. ~~be monitored annually for a three-year period following restoration activities that occur post-construction and post-decommissioning. Based on annual monitoring visits during the three-year period, an annual evaluation report shall be submitted to the Kern County Planning and Natural Resources Department for each of the three years. Should a 75% coverage rate not be feasible through consultation with a qualified botanist, evidence of such shall be submitted to Kern County Planning and Natural Resources Department and an appropriate coverage rate shall be established. The three-year monitoring program is intended to ensure the site achieves native plant diversity, establishes perennials, and is consistent with conditions prior to implementation of the proposed project, where feasible.~~

Section 4.2, Agriculture and Forestry Resources, Page 4.2-11
Table 4.2-3, Site 3

24-30 Wallace and Janice Houchin Family Trust, et al. ~~Houchin Wallace & Janice Family Trust,~~ Book 4771 Page 47

Section 4.2, Agriculture and Forestry Resources, Page 4.2-14
Table 4.2-3, Site 8

24-19 M&C Romanini Family LP, B&E Romanini Investments LP and Romanini Family LP Book 4370 Page 306

Section 4.2, Agriculture and Forestry Resources, Page 4.2-21

…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 property owner promises not to convert the property to nonagricultural uses. To cancel an FSZ contract, the Board of Supervisors must make both of the findings specified in paragraphs (1) and (2) of subdivision (a) of Section 51282 (described above) and must also make the following findings: (1) That no beneficial public purpose would be served by the continuation of the contract; (2) That the uneconomic nature of the agricultural use is primarily attributable to circumstances beyond the control of the landowner and the local government; and (3) That the landowner has paid a cancellation fee equal to 25 percent of the cancellation valuation calculated in accordance with subdivision (b). (Government Code section 51297(c).)

Section 4.2, Agriculture and Forestry Resources, Page 4.2-29
Project Impacts 4.2-1

PG&E Midway (Midway) Substation Upgrades

The proposed Project includes enlarging the Midway Substation's 500-kilovolt (kV) yard within the Midway Substation property boundaries. The Midway Substation parcels comprise approximately 255 acres of which approximately 38.6 acres will be subject to new construction activities as part of the proposed Project. PG&E may install two four-inch fiber-optic line conduits and a four-inch grounding circuit to the west of the Buttonbush gen-tie route to facilitate communication between the Midway Substation and the Point of Change of Ownership, approximately 0.25 miles northwest of the Midway Substation property. Other activities include: installing up to nine, 67.5 cubic feet underground substructure vaults along the conduit trenches; removing an existing precast security wall at the northwest side of the Midway Substation and replacing it with a new 12-foot wall; grading of the connection area; installing approximately one 550 kV, 3,000A, 63kA high-voltage circuit breaker; equipment foundations and concrete trenches; equipment cabinets; bus structures; communication lines; conduits; pull boxes; and concrete-encased conduit duct banks inside of the substation as required.

In addition to substation modifications, the proposed Project includes installing up to 2,000 feet of new 500 kV single-circuit transmission line, creating a new, direct tie from the Midway Substation to the Point of Change of Ownership for the proposed Project. Up to four approximately 175-foot-tall lattice steel towers or tubular steel poles would support the proposed transmission line. Concrete foundations would support the towers based on the designed loads. For a detailed description of the Midway Substation upgrades, see Section 3.0, *Project Description.*

The Midway Substation property consists of lands that are designated as Urban and Built-Up Land, Grazing, and Vacant or Disturbed Land. Therefore, the proposed development on the Midway Substation property would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to nonagricultural use.

Section 4.2, Agriculture and Forestry Resources, Page 4.2-31
Project Impacts 4.2-2

Midway Substation Upgrades

As described above in Impact 4.1-1, the proposed Project includes enlarging the Midway Substation's 500-kV yard within the Midway Substation property boundaries which will entail the installation of new facilities (for example, fiber-optic lines, circuit breakers, equipment cabinets, replacement of an existing wall, and transmission lines) to interconnect the proposed PV solar facilities with the Midway Substation.

The Midway Substation property is zoned Exclusive Agriculture (A) and Limited Agriculture, Mobile Home (A-1). However, PG&E is an investor-owned utility subject to the California Public Utilities Commission's regulation and is not subject to the requirements of the Zoning Ordinance of Kern County. Therefore, the development of the Midway Substation property would not conflict with the A and A-1 zoning regulations.

The Midway Substation property is not subject to a Williamson Act Contract and, therefore, development of it will not involve the cancellation of a Williamson Act Contract.

Section 4.2, Agriculture and Forestry Resources, Page 4.2-32
Project Impacts 4.2-3

Midway Substation Upgrades

As described above in Impact 4.1-1, the proposed Project includes enlarging the Midway Substation's 500-kV yard within the Midway Substation property boundaries which will entail the installation of new facilities (for example, fiber-optic lines, circuit breakers, equipment cabinets, replacement of an existing wall, and transmission lines) to interconnect the proposed PV solar facilities with the Midway Substation.

As stated above, the Midway Substation property is zoned A and A-1. Further, there are no lands within proximity to the Midway Substation property that are zoned forest land or zoned timberland for timberland production.

Section 4.2, Agriculture and Forestry Resources, Page 4.2-32
Project Impacts 4.2-4

Midway Substation Upgrades

As described above in Impact 4.1-1, the proposed Project includes enlarging the Midway Substation's 500-kV yard within the Midway Substation property boundaries which will entail the installation of new facilities (for example, fiber-optic lines, circuit breakers, equipment cabinets, replacement of an existing wall, and transmission lines) to interconnect the proposed PV solar facilities with the Midway Substation.

There are no forest uses on, or within proximity to, the Midway Substation property which could be converted or could otherwise be lost as a result of the proposed development on the Midway Substation property.

Section 4.2, Agriculture and Forestry Resources, Page 4.2-33
Project Impacts 4.2-5

Midway Substation Upgrades

As described above in Impact 4.1-1, the proposed Project includes enlarging the Midway Substation's 500-kV yard within the Midway Substation property boundaries which will entail the installation of new facilities (for example, fiber-optic lines, circuit breakers, equipment cabinets, replacement of an existing wall, and transmission lines) to interconnect the proposed PV solar facilities with the Midway Substation.

Properties located adjacent to, and to the north and east of, the Midway Substation property are in agricultural production. Further, properties located to the south of, across State Route 58 from, the Midway Substation property, and to the west/northwest of, and across the East Side Canal from, the Midway Substation property, are in agricultural production. However, the proposed development on the Midway Substation property is unlikely to affect nearby growers' ability to farm, as it would not restrict access to farmland, and it would not introduce sensitive receptors thereby requiring additional restrictions and limitations on pesticide, fungicide, and/or herbicide applications to crops, or noise, burning, and dust control. The Midway Substation property is currently developed with substation infrastructure and, therefore, the proposed Project would not change the use of the property. Additionally, development on the Midway Substation property would not increase traffic to the area during operations of the proposed Project or otherwise induce growth in the vicinity of the Project site.

Finally, development of the Midway Substation property would not make changes to the existing environment that could affect the defining characteristics of off-site farmland regarding land use, soil quality, or water availability. The proposed Project does not involve the installation of features (for example, buildings) which would generate significant shadow effects on adjacent agricultural lands. Besides potential temporary impacts associated with construction activities, the proposed development on the Midway Substation property does not have operational features that could create significant impacts to surrounding farmlands.

Section 4.2, Agriculture and Forestry Resources, Page 4.2-34
Project Impacts 4.2-6

Midway Substation Upgrades

As described above in Impact 4.1-1, the proposed Project includes enlarging the Midway Substation's 500-kV yard within the Midway Substation property boundaries which will entail the installation of new facilities (for example, fiber-optic lines, circuit breakers, equipment cabinets, replacement of an existing wall, and transmission lines) to interconnect the proposed PV solar facilities with the Midway Substation.

The Midway Substation property is not subject to an Open Space Contract made pursuant to the California Land Conservation Act of 1965 or a Farmland Security Zone Act Contract for a parcel of 100 or more acres.

Section 4.2, Agriculture and Forestry Resources, Page 4.2-35
Cumulative Setting Impacts and Mitigation Measures

Midway Substation Upgrades

As described above in Impact 4.1-1, the proposed Project includes enlarging the Midway Substation's 500-kV yard within the Midway Substation property boundaries which will entail the installation of new facilities (for example, fiber-optic lines, circuit breakers, equipment cabinets, replacement of an existing wall, and transmission lines) to interconnect the proposed PV solar facilities with the Midway Substation.

As stated above, the Midway Substation property consists of lands that are designated as Urban and Built-Up Land, Grazing, and Vacant or Disturbed Land. Therefore, the proposed development on the Midway Substation property would not contribute to the cumulative conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use which will result from certain, other projects located in Kern County.

Although the Midway Substation property is zoned A and A-1, PG&E is an investor-owned utility subject to the California Public Utilities Commission's regulation and is not subject to the requirements of the Zoning Ordinance of Kern County. Therefore, the development of the Midway Substation property would not conflict with the A and A-1 zoning regulations and would not contribute to cumulative impacts to agricultural resources due to a conflict with agricultural zoning regulations. Further, the Midway Substation property is not subject to a Williamson Act Contract and, therefore, development of it will not require cancellation of such a contract that could contribute to cumulative impacts to agricultural lands.

There are no lands within proximity to the Midway Substation property that are zoned forest land or zoned timberland for timberland production with which the proposed development on the Midway Substation property could conflict and contribute to cumulative impacts regarding such lands. Similarly, there are no forest uses on, or within proximity to, the Midway Substation property which could be converted or could otherwise be lost as a result of the proposed development on the Midway Substation property, thereby contributing to cumulative impacts regarding such lands.

As stated above, the Midway Substation property is located adjacent and within proximity to lands that are in agricultural production. However, development on the Midway Substation property is unlikely to affect nearby growers' ability to farm, as it would not restrict access to farmland, and it would not introduce sensitive receptors thereby requiring additional restrictions and limitations on agricultural activities. The Midway Substation property is currently developed with substation infrastructure and, therefore, the proposed Project would not change the use of the property. Additionally, development on the Midway Substation property would not increase traffic to the area during operation of the proposed Project or otherwise induce growth in the vicinity of the

Project site. Finally, development of the Midway Substation property would make no other changes to the existing environment that would affect the defining characteristics of off-site farmland regarding land use, soil quality, or water availability. The proposed Project does not involve the installation of features which would generate significant shadow effects on adjacent or any other agricultural lands. Besides potential temporary impacts associated with construction activities, the proposed development on the Midway Substation property does not have operational features that could result in a cumulatively considerable contribution to a significant cumulative impact regarding farmlands.

Finally, the Midway Substation property is not subject to an Open Space Contract made pursuant to the California Land Conservation Act of 1965 or a Farmland Security Zone Act Contract for a parcel of 100 or more acres. Therefore, the proposed development of the Midway Substation property will not make a cumulatively considerable contribution to impacts to agricultural resources, due to the cancellation of such contracts.

Section 4.3, Air Quality, Page 4.3-1

Information contained within this section was primarily provided by the Final Air Quality, Greenhouse Gas Emissions, and Energy Technical Report, dated August 2025, which was prepared by Dudek and included as Appendix C.2 of this Draft EIR. Additional information was taken from the Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum for the Buttonbush Solar and Storage Project, dated January 13, 2026, which was prepared by Dudek and included as Appendix N of the Final EIR. The Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum provides updates to the technical report based on comments received during the public comment period for the proposed Project. The report was prepared in accordance with the 2006 Kern County Planning Department's Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports and the 2015 San Joaquin Valley Air Pollution Control District (SJVAPCD) (SJVAPCD 2015a) Guidance for Assessing and Mitigating Air Quality Impacts. Other informational resources that were considered and/or on which the analysis relied as applicable are included in Appendix C.3 of this Draft EIR and consist of the following:

Section 4.3, Air Quality, Page 4.3-56 and 57

The findings in the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report prepared for the proposed Project (located in Appendix C.2 of this Draft EIR) were used to assess the proposed Project's impacts related to air quality. Supplementary information was taken from the Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum for the proposed Project (located in Appendix N of the Final EIR). Additional details regarding data and assumptions used for estimating emissions, including California Emissions Estimator Model (CalEEMod) inputs and outputs, can also be found in Appendix C.2: Air Quality, Greenhouse Gas Emissions, and Energy Technical Report and Appendix N: Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum.

Section 4.3, Air Quality, Page 4.3-58

Emissions from the operational phase of the proposed Project were estimated using CalEEMod Version 2022.1.1.29. Operational year 2030 was assumed consistent with completion of project construction. CalEEMod was used to estimate operational emissions from ~~area sources, including emissions from~~ consumer product use, architectural coatings, landscape maintenance equipment, building electricity use, worker commute vehicles, ~~and~~ delivery vehicles, and emergency backup generators.

Section 4.3, Air Quality, Page 4.3-60

...Therefore, an assessment of the potential risk to the population attributable to emissions of TACs from the proposed Project is required.

Stationary Sources

Up to 10 emergency backup generators could be implemented and utilized during operation of the proposed Project. These backup generators would be installed for redundant permanent power for the O&M buildings, onsite substations and/or battery energy storage system facilities. It was assumed that the generators would be rated EPA Tier 3 and 568 horsepower (Generac 2015). It was assumed that each generator would be operated up to 2 hours per day and 200 hours per year. CalEEMod was used to estimate emissions from operation of the emergency generators.

Section 4.3, Air Quality, Page 4.3-60

To predict the potential health risk to the population attributable to emissions of TACs from construction of the proposed Project, ambient air concentrations were predicted with dispersion modeling to arrive at a conservative estimate of increased individual carcinogenic risk and noncancerous health risk that might occur as a result of continuous exposure over a 60 month construction period. Health risk was determined using EPA's AERMOD dispersion model, CARB's Hot-spots Analysis Reporting Program (HARP2), following guidance from the California EPA OEHHA, as detailed in the Final Air Quality, Greenhouse Gas Emissions, and Energy Technical Report and Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum.

Section 4.3, Air Quality, Page 4.3-60

For risk assessment purposes, PM10 in diesel exhaust is considered DPM, originating mainly from off-road equipment operating at a defined location for a given length of time at a given distance from sensitive receptors. Less-intensive, more-dispersed emissions result from on-road vehicle exhaust (for example, heavy-duty diesel trucks). DPM would also originate from operation of the emergency backup generators. For the construction HRA, the CalEEMod scenario for the proposed Project was adjusted to reduce diesel truck one-way trip distances to 0.25 miles to estimate emissions from truck pass-by at proximate receptors (SJVAPCD 2018).

Section 4.3, Air Quality, Page 4.3-62

Impact 4.3-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Activities that would be authorized under the proposed Project would result in emissions from on-road vehicular traffic, use of consumer products, ~~and~~ landscape maintenance equipment, and operation of emergency backup generators. ~~No new stationary sources of emissions are associated with proposed Project operation.~~ Air pollutants would also be emitted during Project construction (off-road construction equipment, on-road vehicles, and fugitive PM from material movement).

Section 4.3, Air Quality, Page 4.3-63
Consistency with SJVAPCD Applicable Permits Required

SJVAPCD Rule 2010 (Permits Required) requires that an ATC Permit and a PTO be obtained prior to constructing, altering, replacing, or operating any device that emits or may emit air contaminants. ~~SJVAPCD Rule 2410 (PSD) requires that preconstruction permits be obtained for new major stationary sources and major modifications to existing major stationary sources in areas classified as attainment or unclassifiable for any criteria pollutant.~~ Since the proposed Project would require up to 10 emergency backup generators, ~~not construct or modify an existing stationary source device, no~~ ATC Permits~~,~~ and Permits to Operate~~, or PSD preconstruction permits would~~ may be required. The proposed Project will comply with SJVAPCD Rule 2010 requirements as applicable.

Section 4.3, Air Quality, Page 4.3-64
Permitted Source Emissions

The proposed Project would generate stationary source emissions ~~Emission increases~~ associated with ~~activities authorized~~ operation of up to 10 emergency backup generators ~~under this proposed Project would not be generated by stationary sources~~ that ~~would~~ may require SJVAPCD permits. The proposed Project will comply with SJVAPCD Rule 2010 requirements as applicable. Therefore, permitted source emissions would be consistent with the SJVAPCD's adopted regulatory program to attain state and federal ozone and PM standards.

Section 4.3, Air Quality, Page 4.3-65
The analysis of air quality impacts set forth above included the impacts associated with the Midway Substation upgrades. ~~As stated above, since the proposed Project – including, but not limited to, t~~The Midway Substation upgrades— would not construct or modify an existing stationary-source device~~,~~; therefore, no ATC Permits, Permits to Operate, or PSD preconstruction permits would be required.

Section 4.3, Air Quality, Page 4.3-66
The analysis of air quality impacts set forth above included the impacts associated with the Midway Substation upgrades. ~~As stated above, since the proposed Project – including, but not limited to, t~~The Midway Substation upgrades— would not construct or modify an existing stationary-source device; therefore, no ATC Permits, Permits to Operate, or PSD preconstruction permits would be required.

Section 4.3, Air Quality, Page 4.3-69

As stated above, to evaluate whether the activities that would be authorized under the proposed Project would result in a cumulatively considerable net increase of any criteria pollutant for which the SJVAB is in nonattainment, pollutant emissions will be evaluated against the SJVAPCD Criteria Pollutant thresholds listed in Table 4.3 8: Estimated Annual Construction Criteria Air Pollutant Emissions—Unmitigated. For this analysis, if these thresholds are exceeded then the proposed Project would be considered to have significant impacts. Source data and emissions associated with the proposed Project were determined based on the Final Air Quality, Greenhouse Gas Emissions, and Energy Technical Report (Appendix C.2) and the Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum (Appendix N).

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Operational Emissions

Operation of the proposed Project would generate ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips from passenger vehicles and heavy-duty trucks, ~~and~~ area sources, including the use of consumer products and landscape maintenance equipment, and ~~along~~ stationary sources including up to 10 ~~with~~ emergency backup generators. However, the proposed Project does not result in substantial or continuous energy emissions given that the proposed Project would generate solar energy and would not require natural-gas appliances. Table 4.3 16: Estimated Annual Operational Criteria Air Pollutant Emissions—Unmitigated, presents the annual area, ~~and~~ mobile, and stationary source emissions associated with operation (year 2030) of the proposed Project. Details of the emission calculations are provided in Appendix C.2 and Appendix N.

Table 4.3-2: Estimated Annual Operational Criteria Air Pollutant Emissions—Unmitigated

Emission Source	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Tons Per Year					
Mobile	0.02	0.38	0.45	0.00	0.25	0.07
Area	0.25	0.00	0.21	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Stationary	0.19	2.61	2.42	0.01	0.39	0.21
Total	~~0.27~~0.46	~~0.38~~2.99	~~0.66~~3.08	~~0.00~~0.01	~~0.25~~0.39	~~0.07~~0.21
SJVAPCD Threshold	*10*	*10*	*100*	*27*	*15*	*15*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Dudek 2025, Dudek 2026

Note: Totals may not sum due to rounding.

Key: CO = carbon monoxide; NO_x = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter; PM_{10} = coarse particulate matter; ROG = reactive organic compound; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01; SO_x = sulfur oxides

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Table 4.3-3: Estimated Maximum Daily Operational Criteria Air Pollutant Emissions – Unmitigated

Source	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds Per Day					
Summer						
Mobile	0.14	1.97	3.29	0.02	1.41	0.39
Area	1.59	0.02	2.31	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Stationary	3.72	52.09	48.37	0.09	2.79	2.79
Total	~~1.73~~5.41	~~1.99~~52.41	~~5.60~~51.11	~~0.02~~0.09	~~1.41~~2.81	~~0.39~~2.80
Winter						
Mobile	0.13	2.13	2.24	0.03	1.41	0.39
Area	1.21	ND	ND	ND	ND	ND
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Stationary	3.72	52.09	48.37	0.09	2.79	2.79
Total	~~1.33~~5.02	~~2.13~~52.41	~~2.24~~48.88	~~0.02~~0.09	~~1.41~~2.80	~~0.39~~2.79
SJVAPCD Threshold	*100*	*100*	*100*	*100*	*100*	*100*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Dudek 2025, Dudek 2026

Note: The values shown are the maximum summer or winter daily emissions results from CalEEMod.

Key: CO = carbon monoxide; ND = insufficient data available to determine the value; <0.01 = reported value less than 0.01; NO_x = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter; PM_{10} = coarse particulate matter; ROG = reactive organic compound; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01; SO_x = sulfur oxides

Section 4.3, Air Quality, Page 4.3-83 and 4.3-84

Toxic Air Contaminants

The primary TAC of concern for the proposed Project would be DPM emitted within the Project site from the construction and operation of the proposed Project. ~~During operation, the proposed Project would not emit TAC emissions in substantial quantities, given that operational emissions would consist mostly of off-site, area source emissions from consumer products and from employees commuting.~~ The proposed Project would result in new emissions of TACs of DPM from construction equipment exhaust and operation of emergency backup generators and would be located near existing residents and workers; therefore, an assessment of the potential risk to the population attributable to emissions of TACs from the proposed Project is required.

An HRA was completed for the proposed Project as part of the air quality impact assessment using the HARP2 software distributed by CARB. The HRA evaluated the potential cancer risk and chronic noncancer risk from toxic emissions associated with construction and operation of the proposed Project. There is no reference exposure level for acute health impacts from DPM and, thus, acute risk was not evaluated. Air dispersion modeling of DPM from construction equipment was conducted using emissions estimated using CalEEMod and a spreadsheet-based model, assuming emissions would occur 8 hours per day, 5 days per week. The Project site was modeled as a series of line-volume sources. On-site emissions of vehicles were also included, assuming a 0.25-mile travel distance. Air dispersion modeling of DPM from the emergency generators was conducted using emissions estimated using the CalEEMod. The emergency generators were modeled as point sources with the following source parameters: release height of 9.83 feet; exhaust

temperature of 1,256 °F; stack diameter of 0.417 feet; and exhaust flow rate of 3,044 ft3 per minute (Generac 2015). Discrete receptors were placed over residences proximate to the proposed Project.

Results of the ~~construction~~ HRA are presented in Table 4.3 18: ~~Construction~~ Health Risk Assessment Results—Unmitigated. Additional methodological details and electronic modeling files for the construction HRA are provided in Appendix C.2 and Appendix N.

Table 4.3-4: ~~Construction~~ Health Risk Assessment Results—Unmitigated

	Units	Value	SJVAPCD Significance Threshold	Is Threshold Exceeded?
Maximum Individual Cancer Risk – Residential Construction	Per Million	2.0	20	No
Chronic Hazard Index – Residential Construction	Index Value	0.001	1.0	No
Maximum Individual Cancer Risk – Residential Operation	Per Million	1.7	20	No
Chronic Hazard Index – Residential Operation	Index Value	0.0003	1.0	No
Maximum Individual Cancer Risk – Residential Combined	Per Million	3.2	20	No
Chronic Hazard Index – Residential Combined	Index Value	0.001	1.0	No

Source: Dudek 2025, Dudek 2026

Key: SJVAPCD = San Joaquin Valley Air Pollution Control District

Section 4.3, Air Quality, Page 4.3-84 and 4.3-85

As shown in Table 4.3-18: ~~Construction~~ Health Risk Assessment Results—Unmitigated, proposed Project construction and operational activities would result in a residential maximum individual cancer risk of ~~2.0~~3.2 in 1 million, which is less than the significance threshold of 20 in 1 million. Proposed Project construction and operation would result in a Residential Chronic Hazard Index of 0.001, which is below the 1.0 significance threshold. The proposed Project construction and operation TAC health-risk impacts would be less than significant. Table 4.3 19: ~~Construction~~ Health Risk Assessment Results—Mitigated, shows the results of the ~~construction~~ HRA including implementation of Mitigation Measure MM 4.3-5.

Table 4.3-5: ~~Construction~~ Health Risk Assessment Results—Mitigated

	Units	Value	SJVAPCD Significance Threshold	Is Threshold Exceeded?
Maximum Individual Cancer Risk – Residential Construction	Per Million	0.2	20	No
Chronic Hazard Index – Residential Construction	Index Value	0.0001	1.0	No
Maximum Individual Cancer Risk – Residential Operation	Per Million	1.7	20	No
Chronic Hazard Index – Residential Operation	Index Value	0.0003	1.0	No
Maximum Individual Cancer Risk – Residential Combined	Per Million	1.8	20	No
Chronic Hazard Index – Residential Combined	Index Value	0.0004	1.0	No

Source: Dudek 2025, Dudek 2026

Key: SJVAPCD = San Joaquin Valley Air Pollution Control District

As shown in Table 4.3-19: ~~Construction~~ Health Risk Assessment Results—Mitigated, proposed Project construction and operational activities would result in a residential maximum individual cancer risk of ~~0.2~~1.8 in 1 million, which is less than the significance threshold of 20 in 1 million. Proposed Project construction and operation would result in a Residential Chronic Hazard Index of 0.000~~1~~4, which is below the 1.0 significance threshold. The proposed Project construction and operation TAC health-risk impacts would be less than significant with implementation of Mitigation Measure MM 4.3-1 through Mitigation Measure MM 4.3-5.

~~During operation, the proposed Project would not emit TAC emissions in substantial quantities, given that operational emissions would consist mostly of off-site, area source emissions from consumer products and from employees commuting.~~

Section 4.3, Air Quality, Page 4.3-89

As shown in Table 4.3 18: ~~Construction~~ Health Risk Assessment Results—Unmitigated, and Table 4.3 19: ~~Construction~~ Health Risk Assessment Results—Mitigated, proposed Project construction and operational activities would result in a residential maximum individual cancer risk of ~~2.0~~3.2 in 1 million, which is less than the significance threshold of 20 in 1 million. Proposed Project construction and operation would result in a Residential Chronic Hazard Index of 0.001, which is below the 1.0 significance threshold. The proposed Project ~~construction~~ TAC health-risk impacts, including those associated with the Midway Substation upgrades, would be less than significant and further reduced with implementation of Mitigation Measure MM 4.3-4 and MM 4.3-5. ~~Further, during operation, the proposed Project would not emit TAC emissions in substantial quantities, given that operational emissions would consist mostly of off-site, site area source emissions from consumer products and from employees commuting.~~

Section 4.3, Air Quality, Page 4.3-97
TACs and Odors

As stated above, the proposed Project would not generate TACs that could pose a substantial, individual cancer risk to residents or others located within the vicinity of the Project site. In addition, given the distances between the projects included in the analysis of cumulative impacts in relation to the location of sensitive receptors, the dispersion of air emissions, and implementation of MM 4.3-1 through MM 4.3-5, the proposed Project construction and operational activities do not have the potential for a considerable contribution to a significant cumulative impact involving the exposure of sensitive receptors to TACs. ~~Further, during operation, the proposed Project would not emit TAC emissions in substantial quantities which would be cumulatively considerable, given that operational emissions would consist mostly of off-site, area source emissions from consumer products and from employees commuting.~~

Section 4.3, Air Quality, Page 4.3-99

Table 4.3-6: Comparative Analysis Based on San Joaquin Valley Air Basin 2020 Inventory

Emissions Source	Emissions (Tons/Year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Project Emissions						
Year 1 Construction Total	0.25	1.65	7.03	0.01	8.39	0.97
Year 2 Construction Total	0.85	5.30	22.14	0.04	25.43	2.99
Year 3 Construction Total	0.40	3.24	12.60	0.03	16.56	1.89
Year 4 Construction Total	0.92	6.72	19.59	0.04	26.72	3.18
Year 5 Construction Total	0.89	5.16	19.21	0.04	29.03	3.44
Year 6 Construction Total	0.37	1.99	8.09	0.02	12.88	1.52
Project Operation	~~0.27~~0.46	~~0.38~~2.99	~~0.66~~3.08	~~0.00~~0.01	~~0.25~~0.39	~~0.07~~0.21
Year 1 Decommissioning Total	0.07	0.57	2.98	0.01	4.36	0.51
Year 2 Decommissioning Total	0.46	3.59	17.97	0.04	27.96	3.28
Year 3 Decommissioning Total	0.37	3.02	12.22	0.03	25.58	3.00
Total Project Emissions	~~4.85~~5.04	~~31.62~~34.23	~~122.49~~124.91	~~0.26~~0.27	~~177.16~~177.30	~~20.85~~20.99
Kern County and San Joaquin Valley Air Basin Emissions						
Kern County – 2020	21,535	15,878	27,337	511	13,651	3,723
San Joaquin Valley Air Basin - 2020	108,113	74,205	162,425	2,847	69,652	21,535
Analytical Results						
Proposed Project Percent of Kern County	0.02%	~~0.20~~0.22%	~~0.45~~0.46%	0.05%	1.30%	0.56%
Proposed Project Percent of SJVAB	<0.01%	~~0.04~~0.05%	0.08%	0.01%	0.25%	0.10%

Key: CO = carbon monoxide; NO_X = oxides of nitrogen; $PM_{2.5}$ = particulate matter less than 2.5 microns; PM_{10} = particulate matter less than 10 microns; ROG = reactive organic compound; SJVAB = San Joaquin Valley Air Basin; SO_2 = sulfur dioxide

Section 4.3, Air Quality, Page 4.3-100

Table 4.3-7: Comparative Analysis Based on San Joaquin Valley Air Basin 2025 Projection

Emissions Source	Emissions (Tons/Year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Project Emissions						
Year 1 Construction Total	0.25	1.65	7.03	0.01	8.39	0.97
Year 2 Construction Total	0.85	5.3	22.14	0.04	25.43	2.99
Year 3 Construction Total	0.4	3.24	12.6	0.03	16.56	1.89
Year 4 Construction Total	0.92	6.72	19.59	0.04	26.72	3.18
Year 5 Construction Total	0.89	5.16	19.21	0.04	29.03	3.44
Year 6 Construction Total	0.37	1.99	8.09	0.02	12.88	1.52
Project Operation	~~0.27~~0.46	~~0.38~~2.99	~~0.66~~3.08	~~0.00~~0.01	~~0.25~~0.39	~~0.07~~0.21
Year 1 Decommissioning Total	0.07	0.57	2.98	0.01	4.36	0.51
Year 2 Decommissioning Total	0.46	3.59	17.97	0.04	27.96	3.28
Year 3 Decommissioning Total	0.37	3.02	12.22	0.03	25.58	3
Total Project Emissions	~~4.85~~5.04	~~31.62~~34.23	~~122.49~~124.91	~~0.26~~0.27	~~177.16~~177.30	~~20.85~~20.99
Kern County and San Joaquin Valley Air Basin Emissions						
Kern County – 2025	21,353	10,804	26,674	475	13,651	3,687
San Joaquin Valley – Air Basin - 2025	107,347	52,451	145,964	2,920	95,922	21,280
Analytical Results						
Proposed Project Percent of Kern County	0.02%	~~0.29~~0.32%	~~0.46~~0.47%	~~0.05~~0.06%	1.30%	0. 57%
Proposed Project Percent of SJVAB	<0.01%	~~0.06~~0.07%	~~0.08~~0.09%	0.01%	0.18%	0.10%

Key: CO = carbon monoxide; NO_X = oxides of nitrogen; $PM_{2.5}$ = particulate matter less than 2.5 microns; PM_{10} = particulate matter less than 10 microns; ROG = reactive organic compound; SJVAB = San Joaquin Valley Air Basin; SO_2 = sulfur dioxide

Section 4.4, Biological Resources, Page 4.4-22

There were seven ~~four~~ special status plant species and 17 animal species determined to have potential to occur on the Project site and potentially be affected by the proposed Project (Table 4.4-5: Special-Status Plants with Potential to Occur on the BSA and Table 4.4-7: Special-Status Wildlife Species with Potential to Occur on the BSA). A complete list of wildlife observed is included in Appendix D.2. There were one special status plant species and six animal species determined to have potential to occur on the Midway Substation site and potentially be affected by the proposed Project (Appendix D.5).

Section 4.4, Biological Resources, Page 4.4-23

Based on the results of literature review and database searches, one special-status species has a high potential to occur (Appendix D.2) on the Project site. Based on focused surveys conducted in 2024 and 2025, ~~three~~ seven special-status plants were observed (Appendix D.2) on the Project site. One special-status plant species was observed on the Midway Substation site during focused surveys in 2024 (Appendix D.5). Plant species with potential to occur on the Project site and potentially be affected by the proposed Project are identified in Table 4.4-5: *Special-Status Plants with Potential to Occur on the BSA*. Plant species with a low potential to occur or plant species that are not expected to occur are not discussed further because no significant direct, indirect, or cumulative impacts to these species are expected to result from the proposed Project.

Section 4.4, Biological Resources, Page 4.4-24

Table 4.4-8. Special-Status Plants with Potential to Occur on the BSA

Common Name (*Scientific Name*)	Status (Federal/ State/CRPR)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (ft amsl)	Potential to Occur
Heartscale (*Atriplex cordulata* var. *cordulata*)	None/None/1B.2	Chenopod scrub, meadows and seeps, valley and foothill grassland (sandy); alkaline (sometimes)/annual herb/Apr–Oct/0–1,835.	Present. There are approximately 22,642 individuals within the BSA. – Site 1: 20,000 individuals observed. – Site 2: 10 individuals observed. – Site 4: 1 individual observed. – Gen-tie line: 2,631 individuals observed. Present on Midway Substation site. This species was observed during focused surveys conducted in June 2024. One CNDDB record from 1999 has been recorded of this species approximately 3.5 miles southwest of the Midway Substation site (Appendix D.5).
Earlimart orach (*Atriplex cordulata* var. *erecticaulis*)	None/None/1B.2	Valley and foothill grasslands, growing at elevations from 40 to 100 meters/annual herb/April to October	Present. Approximately 1,650 individuals were observed on the project site during 2025 surveys.
Lost Hills crownscale *(Atriplex coronata* var. *vallicola)*	None/None/1B.2	Chenopod scrub, valley and foothill grasslands, and vernal pools, growing at elevations from 50 to 635 meters/annual herb/ April and August	Present. Approximately 1,400 individuals were observed on the project site during 2025 surveys
California alkaligrass *Puccinellia simplex*	None/None/1B.2	Mineral springs and other moist habitats with saline soils in the Central Valley, Mojave Desert, and other areas, growing at elevations from 2 to 930 meters/annual grasslike herb/ March and May	Present. Approximately 9,420 individuals were observed on the project site during 2025 surveys.
lesser saltscale (*Atriplex minuscula*)	None/None/1B.1	Chenopod scrub, playas, valley and foothill grassland; alkaline, sandy/annual herb/May–Oct/50–655.	Present. There are approximately 3,817 individuals within the BSA, all in Site 8.

Common Name (*Scientific Name*)	Status (Federal/ State/CRPR)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (ft amsl)	Potential to Occur
kern mallow (*Eremalche parryi* ssp. *kernensis*)	FE/None/1B.2	Chenopod scrub, pinyon and juniper woodland, valley and foothill grassland; clay (sometimes), dry, openings, sandy (sometimes)/annual herb/Jan(Feb)Mar–May/230–4,230.	~~High potential to occur.~~ Present. This species is known to occur approximately 1 mile from the BSA (Appendix D.2), and 57 individuals were observed on the project site during 2025 surveys. Additionally, Sites 1, 3, and 8 and the gen-tie line route contain suitable chenopod scrub and/or grassland habitat to support this species.
alkali-sink goldfields (*Lasthenia chrysantha*)	None/None/1B.1	Vernal pools; alkaline/annual herb/Feb–Apr/0–655.	Present. There are approximately 50 individuals within the BSA, all in Site 3.

Status Legend:

Federal: FE – Federally listed as endangered; State: SE – State listed as endangered

California Rare Plant Rank: 1B: Plants rare, threatened, or endangered in California and elsewhere

Threat Rank: 0.1 – Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat); 0.2 – Moderately threatened in California (20 percent–80 percent occurrences threatened/moderate degree and immediacy of threat)

Key: CRPR = California Rare Plant Rank; ft amsl = feet above mean sea level.

Section 4.4, Biological Resources, Page 4.4-25

Heartscale

The heartscale (*Atriplex cordulata* var. *cordulata*) is an annual herb endemic to California and currently has the California Rare Plant Rank (CRPR) status of 1B.2. Heartscale is found in saline and alkaline soils, chenopod scrub, meadows and seeps, and sandy soils in valley-foothill grassland habitats between sea level and 1,835 feet, and occur in Alameda, Butte, Contra Costa, Colusa, Fresno, Glenn, Kern, Madera, Merced, San Joaquin, Solano, Stanislaus, Tulare, and Yolo counties. This species is threatened by competition from non-native plants and possibly threatened by trampling. Heartscale blooms from April to October. Approximately 22,642 total heartscale individuals were observed during 2024 botanical surveys (20,000 on Site 1; 10 on Site 2; 1 on Site 4; and 2,631 on the gen-tie line route) (Dudek 2025a).

This species was observed on the Midway Substation site during focused surveys conducted in June 2024 and on the project site in 2025.

Lesser Saltscale

Lesser saltscale (*Atriplex minuscula*) is an annual herb native to California and has a CRPR status of 1B.2. On August 29, 2025, a petition to list the species as threatened under CESA was submitted to the California Fish and Game Commission (Commission). The Commission has not taken action on the petition. This species grows in alkaline and saline soils within chenopod scrub, playas, and valley and foothill grassland habitats, at elevations ranging from sea level to 2,950 feet. The primary threats to the lesser saltscale are urban development, agricultural conversion, and competition from invasive non-native plants. It blooms from May to October. Approximately 3,817 lesser saltscale individuals were observed during 2024 botanical surveys, all on Site 8.

Kern Mallow

Kern mallow is an annual herb that blooms between January until May and has a CRPR 1B.1 status. It is also federally listed as endangered under the ESA. It is found on dry, open sandy to clay soils, often at the edges of balds in chenopod scrub, pinyon and juniper woodland, and valley and foothill grassland. It occurs at elevations ranging from approximately 230 to 4,230 feet. Based on the results of the literature review and database searches, Kern mallow has a high potential to occur on the BSA on Sites, 1, 2, 3, 8 and the gen-tie line route. Fifty-seven individual Kern mallow were observed on the project site during 2025 surveys.

Kern Alkali-Sink Goldfields

Alkali-sink goldfields is an annual herb endemic to California. It is a CRPR species with a status of 1B.1. This species is found in alkali playa and other saline or alkaline soils, as well as valley grassland habitats, at elevations ranging from sea level to 655 feet. The main threats to this species are agricultural conversion and urban development. Alkali-sink goldfields typically bloom from February to April. There are approximately 50 individuals within the BSA, all in Site 3.

Not all sites within the BSA contain suitable habitat resources to support the species described above. Therefore, **Table 4.4-6**: Special-Status Plant Species Expected and Potential Impacts, summarizes expected impacts (that is, where special-status plant species were observed during 2024 botanical surveys) and potential impacts to special-status plants broken down by site and the gen-tie line area.

Earlimart Orach

Earlimart orach (*Atriplex cordulata* var. *erecticaulis*) is an annual herb endemic to California with a CRPR rank of 1B.2. The species is typically found in valley and foothill grasslands, growing at elevations from 40 to 100 meters, and it generally flowers between April to October (Calflora 2025). This species is very similar to heartscale but can be differentiated by the length of the center tooth on the fruit bracts with heartscale having a longer center tooth (Jepson Flora Project 2025). Its CRPR ranking is 1B.2 and has no federal or state listing status. This species was observed during 2025 botanical surveys in four general areas in the western portion of the botanical study area: along Rowlee Road east of I-5 (a gentie route option), in a fallow field between Warren Avenue and I-5 (Site 3), along an unnamed farm road between Buttonwillow Drive and East Side Canal (a gentie route option), and in some disturbed areas between the Buttonwillow substation and I-5 (Site 1).

Lost Hills Crownscale

Lost Hills crownscale (*Atriplex coronata* var. *vallicola*) is an annual herb in the goosefoot family and has alternate leaves with reduced distal leaves. It is endemic to California, and found in Fresno, Kern, Kings, Madera, Merced, San Benito, San Joaquin, and Tulare counties. The species is typically found in Chenopod scrub, valley and foothill grasslands, and vernal pools, growing at elevations from 50 to 635 meters, and generally flowers between April and August. Lost Hills crownscale is adapted to saline and alkaline soils. Its CRPR ranking is 1B.2 and has no federal or state listing status. This species was observed during 2025 botanical surveys in three general areas in the western portion of the botanical study area: on the northeast corner of the intersection of Rowlee Road and W. Lerdo Highway in the disturbed corner of an agricultural field (Site 8), in fallow fields between Warren Avenue and I-5 (Site 3), and in a disturbed area north of the Buttonwillow substation.

California Alkaligrass

California alkaligrass (*Puccinellia simplex*) is an annual grasslike herb in the grass family (Poaceae). It is endemic to California, and found in Alameda, Butte, Contra Costa, Fresno, Glenn, Kern, Kings, Lassen, Madera, Merced, Modoc, Mono, Monterey, Napa, Placer, Riverside, Sacramento, San Bernardino, San Joaquin, San Luis Obispo, Santa Barbara, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, and Yolo counties. The species is typically found in mineral springs and other moist habitats with saline soils in the Central Valley, Mojave Desert, and other areas, growing at elevations from 2 to 930 meters. Its CRPR ranking is 1B.2, indicating it is rare, threatened, or endangered in California and elsewhere, and moderately threatened in California, and has no federal or state listing status. This species was observed in three general areas in the

northern and western portions of the botanical study area: in a fallow field between Warren Avenue and I-5 (Site 2), in a natural alkali sink north of Dresser Avenue in the far north of the botanical study area (Site 8), and a disturbed area north of 7th Standard Road west of I-5 (Site 3 and a gentie route option).

Table 4.4-9. Special-Status Plant Species Expected and Potential Impacts

Special-Status Plant Species	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 8	Gen-Tie
heartscale	X	X	x	X	—	—	x	X
lesser saltscale	x	x	x	—	—	—	X	x
alkali-sink goldfields	—	X	x	—	—	—	x	—
Kern mallow	~~x~~ X	x	x	—	—	—	~~x~~ X	~~x~~ X
Earlimart orach	X	x	X	—	—	—	x	X
Lost Hills crownscale	x	x	X	—	—	—	X	X
California alkaligrass	x	X	x	—	—	—	X	X

Key: Gen-tie = generation transmission line route; X = expected impact; x = potential impact

Section 4.4, Biological Resources, Page 4.4-93

Heartscale were observed in the Midway Substation site during focused surveys conducted in 2024 (Appendix D.5). Based on existing vegetation mapping, the development on the Midway Substation site would result in the permanent loss of 18.7 ~~86~~ acres of suitable grassland habitat (Appendix D.5).

Section 4.4, Biological Resources, Page 4.4-93

Blunt-nose leopard lizard were not observed during the biological reconnaissance survey in 2024, but has moderate potential to occur in the Midway Substation site (Appendix D.5). The Midway Substation site contains suitable, yet sparse vegetated areas including grasslands for this species. Based on existing vegetation mapping, the proposed Project would result in the permanent loss of 18.7 ~~86~~ acres of suitable grassland habitat (Appendix D.5).

Section 4.4, Biological Resources Page 4.4-97

MM 4.4-3: During construction and decommissioning of the Project site, the Project proponent and/or contractor(s) shall implement the following general avoidance and protective measures: …

c. Access roads that are planned for use during construction activities shall not extend beyond the planned impact area, which area includes all previously disturbed lands and any location within the project fence line not delineated for avoidance of sensitive biological resources. Where new access routes are required, the route will be clearly marked prior to construction. Access roads will avoid impacts to special-status plant occurrences, if feasible.

d. The project proponent/operator shall minimize the areas of disturbance. Parking areas, new roads, staging, storage, excavation, and disposal site locations shall be confined to the smallest areas possible. These areas shall be demarcated, and disturbance activities, vehicles, and equipment shall be confined to these areas. Parking areas will be located to avoid impacts to special-status plant occurrences, if feasible.

…

i. Workers shall be prohibited from bringing pets and firearms to the project site and from feeding wildlife. To the extent feasible, nighttime construction-related activity shall be minimized, but if work must be conducted at night ~~If night work occurs on the project site~~, the speed limit will be 10 miles per hour.

Section 4.4, Biological Resources Page 4.4-99

MM 4.4-4: Prior to the start of ground-disturbance activities or decommissioning of the main project site, a qualified biologist knowledgeable on the identification of rare plant species shall conduct a pre-construction plant survey of areas of proposed disturbance within the main project site and a 100-foot buffer (where legally accessible) timed during the appropriate blooming period of the target species (all special-status plants with potential to occur at the project ~~March to May for Kern mallow, and February to April for alkali sink goldfields~~) prior to start of construction activities in this area to determine if any special-status plant species are present. If special-status plants are not identified during the survey(s), no further action is required. If special-status plants are identified on-site, their locations shall be mapped and Ecologically Sensitive Area (ESA) fencing should be established at a 50-foot radius around these individuals to ensure that they are not destroyed during project construction activities. ~~Pursuant to Section 1913(c) of the California Fish and Game Code, if~~ If project activities cannot avoid direct impacts to special-status plants, CDFW shall be notified and provided the opportunity to salvage any of these plants that would be affected. The CDFW may enter into agreement with the project proponent to retain a qualified entity for the relocation of sensitive plants to an approved location. Any salvage would be undertaken in accordance with a salvage plan to be developed in consultation with CDFW. The plan would include methods for transplanting and watering (if appropriate), success criteria for salvaged plants, monitoring the health and survivorship of salvaged plants during at least 5 years following salvage, and contingency measures if plant survivorship requirements are not satisfied.

If State endangered, threatened, or rare plants, or plants protected as candidate for State listing, are identified during special-status plant surveys, the Project proponent shall consult with CDFW. If take cannot be avoided, then the Project would be required to obtain an ITP from CDFW prior to implementing any Project activities that would cause take.

Prior to initiating ground-disturbing activities during the construction and decommissioning phases of the Project in areas mapped as occupied by Kern mallow, after seeds have set (usually by May 31) remove and stockpile the uppermost 3-6 inches of topsoil. The stockpiled soil shall not be exposed to moisture that could trigger the germination of seed prior to redistribution. The stockpiled material shall be spread in the affected area, the closest comparable area, or the closest suitable habitat outside the footprint of roads, buildings, and structures prior to the next blooming season. During the operational phase of the Project, vegetation and/or fuel management activities within Kern mallow occupied habitat shall be undertaken subsequent to after seeds of Kern mallow have set (usually by May 31). The project proponent shall mitigate for impacted occupied Kern mallow habitat. Compensatory mitigation land shall be provided at a ratio of 1:1 acre on-site or at a nearby location with comparable habitat value. Individual Kern mallow plants and/or seeds will be salvaged from the project site and translocated to the compensatory mitigation lands if authorized by appropriate wildlife agency. Final total compensation land acres will be based on final site plan design and confirmation through the required pre-construction biological surveys. Mitigation land may be nested with other lands established as compensatory mitigation for other resources, provided it meets the necessary biological requirements and as determined by appropriate wildlife agency. Prior to issuance of any building or grading permit, the project proponent shall (i) complete acquisition of such compensatory mitigation lands or equivalent mitigation credits applicable to the portion of the project covered by said grading or building permit; or (ii) provide a bond, letter of credit or other form of financial assurance acceptable to the County in an equivalent amount and acquire such lands or credits within eighteen (18) months of issuance of said building or grading permit.

Section 4.4, Biological Resources Page 4.4-101

MM 4.4-8: A pre-construction survey for Crotch's bumble bee shall occur within the project areas where suitable habitat has been identified during the primary flight period for workers and males (March 1 through June 30) prior to the start of project activities. The survey shall ensure that no nests for Crotch's bumble bee are located within the project areas. Crotch's bumble bee is a habitat generalist, ground-nesting bee. Surveys and other relevant recommendations shall be in accordance with the Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023) or with the most recent protocol available at the time of the surveys.

If thatched/bunch grasses ~~nest resources~~ occupied by Crotch's bumble bee are detected within the project areas, no ground-disturbing activities shall occur within 50 ~~100~~ feet ~~of the occupied nest resources,~~ or as determined by a qualified biologist through evaluation of topographic features or distribution of floral resources. The thatched/bunch grasses ~~nest resources~~ shall be avoided for the

duration of the Crotch's bumble bee nesting period (February 1 through October 31). Outside of the nesting season, it is assumed that no live individuals would be present within the nest, because the daughter queens (gynes) usually leave by September, and all other individuals (original queen, workers, males) die. The gynes are highly mobile and can independently disperse to outside the project footprint to the proposed open space or other suitable areas beyond that have suitable hibernaculum resources. Because construction will have occurred in the area outside the occupied nesting resources, no suitable habitat will be present in the impact area, and it is assumed that new queens will disperse to habitat outside the project areas. If Crotch's bumble bee nests have been detected and ground-disturbing activities will occur during the overwintering period (October through February), the Project proponent shall consult with CDFW to discuss how to implement Project activities and avoid take.

If take cannot be avoided, take authorization prior to any ground disturbing activities is warranted if the species remains a candidate or becomes listed under CESA. Take authorization would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code section 2081(b).

Section 4.4, Biological Resources Page 4.4-103 and Page 4.4-104

MM 4.4-10: Prior to the initiation of ground-disturbing activities, a pre-construction survey to determine if potential breeding resources occur for western spadefoot (for example, temporary puddles, stock ponds, slow-moving water courses) shall be performed prior to the rainy season before start of project activities. The following requirements ~~(Items a through e)~~ shall be implemented if the project area or its immediate vicinity is determined to contain suitable habitat for the western spadefoot. If no potential habitat for western spadefoot is found during the survey, no further mitigation is required.

a. If potentially suitable breeding areas for western spadefoot are identified, a qualified biologist will conduct focused surveys for western spadefoot within all portions of the p~~P~~roject site containing suitable breeding habitat. Survey methods shall be similar to U.S. Fish and Wildlife Service California tiger salamander survey guidelines. A minimum of three rounds of surveys shall be completed in the appropriate season, and a survey report detailing survey results shall be prepared and submitted to the Kern County Planning and Natural Resources Department. ~~a 1,500-foot survey buffer, by locked construction fencing appropriate for amphibian exclusion, shall be installed around the project areas and breeding area. A pre-activity daytime and nighttime pond check and pre-activity nighttime surveys for western spadefoot shall be conducted the winter prior to ground-disturbing activities within the project areas. Surveys for spadefoot will begin during or the night after the first three significant rain (≥ 0.25 inches) events, as early as October or November, though peak breeding season typically occurs February through~~

~~April. Surveys for spadefoot eggs and tadpoles can be done during the day and do not require nighttime surveys.~~

~~b. Daytime surveys will be conducted by walking slowly along pool margins visually searching for (but not disturbing) eggs, larvae, and juveniles. Spadefoot may breed in a variety of ephemeral and perennial habitats from side pools of large rivers to road ruts.~~

~~c. Nighttime surveys will occur between one hour after dusk and midnight and should be timed either during a rain event or the night after a rain event. Nighttime surveys (assuming eggs, larvae, and/or juveniles have not been detected) will be conducted by walking slowly and carefully along water features and between and through suspected breeding and upland habitats.~~

~~d.~~ b Where occupied breeding habitat is present, ~~T~~ transect-based nocturnal eyeshine surveys shall be conducted ~~for~~ in adjacent upland habitat ~~nighttime surveys~~. These are performed through adjacent upland habitat within 1,500 feet of occupied breeding locations or known occupied areas, using an approximate 30-meter transect width (less if there is denser grass and/or shrubs). Surveys must be conducted as silently as possible, because talking or other human-generated noises may cause western spadefoots to stop calling, hide, or leave the area. The surveyor shall rotate 360 degrees approximately every 200–300 meters (within the limits of their headlamp) and look backward along their transect with more frequency as the toads may watch the surveyor as they pass. Strong headlights or flashlights held at surveyor eye level should be used to visually locate and identify adult western spadefoots, and flash photography may be used to document sightings of solitary individuals.

~~e.~~ c. If western spadefoot is detected during surveys, ~~defined in Item a through d,~~ within the p~~P~~roject footprint, construction work should be conducted during the dry season (late fall to early spring) to avoid impacts to active breeding pools during the mating season (December through May) to the extent feasible. Where work must occur adjacent to occupied western spadefoot habitat, wildlife exclusion measures approved by CDFW shall be utilized to minimize take of western spadefoot in the vicinity of construction activities. If occupied burrows are found, a 50-foot no-disturbance buffer shall be observed around any western spadefoot burrow to the extent feasible. ~~then biologists shall collect western spadefoot adults for relocation.~~

d. If avoidance is not feasible, ~~A~~adults shall be relocated outside the p~~P~~roject footprint to portions of open space that have suitable breeding habitat and appropriate upland habitat, are of suitable size to support the translocated individuals, and contain few or no western spadefoot individuals. A relocation plan shall be prepared and approved by the wildlife agencies and lead agency prior to implementation. The plan shall include details regarding specifically how the western spadefoot will be captured, held, moved, and released; where they will be released; what data will be collected regarding the released

individuals; timing; reporting; and other important factors. Relocation of western spadefoot shall follow the latest amphibian handling guidelines provided by the USGS. It is advisable to also capture and release other native herpetofauna that are found. Implementation of this may require a Memorandum of Understanding and/or Scientific Collecting Permit from CDFW and, if listed under the ESA, a Section 10 take permit from USFWS.

~~f.~~ e. If no western spadefoot are detected as a result of the surveys, then the fenced buffer may be removed.

Section 4.4, Biological Resources, Page 4.4-104

MM 4.4-11: Within one calendar year of the start of ground-disturbance activities, a qualified biologist shall conduct protocol-level surveys for the Blunt-Nosed Leopard Lizard (BNLL) to determine the potential for occupancy by BNLL. The required surveys shall be provided to the Kern County Planning and Natural Resources Department, the U.S Fish and Wildlife Service and the California Department of Fish and Wildlife. If no sign of the species is identified, no further action is required. If the species is identified on-site, the project proponent shall confer with the appropriate wildlife agency.

Surveys may be conducted in areas of disturbance and needed buffers as work progresses or in stages as needed during the construction phase. If surveys indicate that BNLL and appropriate burrow habitat are absent, the construction area(s) can be fenced using materials and installing temporary wildlife exclusion fencing in compliance with agency specifications to prevent potential occupancy of BNLL in active construction work areas. If BNLL are found within the survey areas, measures to protect the species shall include appropriate signage, monitoring by approved qualified biologists and consultation with the USFWS and the CDFW to develop a BNLL avoidance plan. If burrows are found to be occupied and take authorization has not been obtained from the wildlife agencies, ~~measures for avoidance and minimization of impact to BNLL shall be written in compliance with recommendations provided during agency consultations and shall contain project specific details~~ project activities shall be paused to allow BNLL to passively leave the work area of its own volition. Project activities may resume once the BNLL has traveled a safe distance away from the work area per the discretion of the qualified biologist. If the BNLL is observed to enter a burrow, a 50-foot ground-disturbance avoidance buffer would be erected. If ground-disturbing activities shall take place within the 50-foot buffer a qualified biologist will monitor the activity. The qualified biologist will evaluate the site conditions, such as soil hardness and activity impact, and determine if the activities can take place without any impacts to BNLL. If eggs are discovered, CDFW shall be contacted within 24 hours for further guidance.

Project actions in areas where BNLL are located shall be restricted to the species active period (April to early November) to ensure that no aestivating BNLL in

burrows are impacted while in their burrows. In conjunction with CDFW or other involved agencies, sensitive areas shall be established and protected with appropriate signage. If take cannot be avoided, the project proponent shall confer with the appropriate wildlife agency and obtain an Incidental Take Permit pursuant to both Section 10(a)(1) of the federal Endangered Species Act and SB 147.

Section 4.4, Biological Resources, Page 4.4-106 and Page 4.4-107

MM 4.4-13: Burrowing Owl Burrow Setbacks. Occupied burrowing owl burrows shall not be disturbed during the species nesting season (February 1 through August 31). The following distances shall be maintained between all disturbance areas and active burrowing owl nesting sites on site unless an Incidental Take Permit (ITP) is obtained that allows for buffer reductions, or a qualified biologist determines a reduced buffer would be adequate to avoid disturbing the owls. If reduced buffers are established, a qualified biologist shall monitor owl behavior and shall increase buffer distance if the owls should show signs of disturbance or distress.

Time of Year		
April 1–Aug 15	Aug 16–Oct 15	Oct 16–Mar 31
Project Impact Level		
Low		
656 feet (200 meters)	656 feet (200 meters)	164 feet (50 meters)
Medium		
1,640 feet (500 meters)	656 feet (200 meters)	328 feet (100 meters)
High		
1,640 feet (500 meters)	1,640 feet (500 meters)	1,640 feet (500 meters)

If active burrowing owl avoidance is infeasible, then the Project proponent shall consult with CDFW regarding potential for project activities to result in take of burrowing owl and shall comply with all avoidance, minimization, and compensatory mitigation requirements set forth in any Incidental Take Permit (ITP) issued for the project by CDFW authorizing take of the species.

Burrowing owls present in proposed disturbance areas or within 500 feet or as specified under an ITP (as identified during pre-construction surveys) outside of the breeding season (between September 1 and January 31) may be moved away from the disturbance area using passive relocation techniques approved by CDFW. Passive relocation techniques in the CDFW's Staff Report on Burrowing Owl Mitigation Guidelines (CDFG 2012) include installing one-way doors in burrow entrances for 48 hours, to ensure the owl(s) have left the burrow, daily monitoring during the passive relocation period, and collapsing existing burrows to prevent reoccupation. A minimum of one or more weeks will be required to relocate the owl(s) and allow for acclimatization to alternate

off-site burrows. Prior to burrow exclusion or eviction, the Project proponent shall prepare a burrowing owl relocation ~~management~~ plan ~~for CDFW's review and approval.~~ which shall include, at a minimum:

- Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species before burrow scoping;
- Type of scope to be used and appropriate timing of scoping to avoid impacts;
- Occupancy factors to look for and what shall 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).
- How the burrow(s) shall 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 no owls reside inside the burrow);
- Removal of other potential owl burrow surrogates or refugia on site;
- Photographing the excavation and closure of the burrow to demonstrate success and sufficiency.

Destruction of burrows shall occur only pursuant to the relocation plan; ~~a CDFW-approved management plan for the species;~~ burrow excavation shall be conducted by hand whenever possible.

~~As an alternative to passive relocation, occupied burrows identified off-site within 500 feet of Project activities may be buffered with hay bales, fencing (for example, sheltering in place), or as directed by the qualified biologist (and CDFW if the species remains protected under CESA), to avoid disturbance of burrows.~~ The provisions of an ITP, if obtained, shall supersede the work restrictions in this measure.

Section 4.4, Biological Resources, Page 4.4-109 and 4.4-110

MM 4.4-16: Within 14 days prior to the start of project ground-disturbing activities, a pre-construction ~~pre-activity~~ survey with a 500-foot buffer where land access is permitted shall be conducted by a qualified biologist knowledgeable in the identification of these species and approved by CDFW. Surveys need not be conducted for all areas at one time; they may be phased so that surveys occur within 14 days of the portion of the project site that will be disturbed. If dens/burrows that could support any of these species are discovered during the pre-activity survey, the avoidance buffers outlined below shall be established. No work shall occur within these buffers unless the biologist approves and

monitors the activity.

~~**Burrowing Owl (Active Burrows)**~~

~~Nonbreeding season (September 1–January 31): 160 feet~~

~~Breeding season (February 1–August 31): 250 feet~~

American Badger/San Joaquin Kit Fox

Potential or atypical den: 50 feet

Known den: 100 feet

Natal or pupping den: 500 feet, unless otherwise specified by CDFW and/or USFWS

In determining whether San Joaquin kit fox activity could occur within these buffers, the biological monitor would take into account the following:

- Noise level and duration. The noise level and duration of activities would be considered. Loud (e.g., greater than 80 decibels) and sustained (e.g., longer than one hour) activities would be disallowed within the buffer setbacks. Activities with shorter durations and/or lower noise levels may be considered with continual observation of the den by the monitor and work stoppage if the biologist detects evidence of disturbance.
- Level of disturbance typically experienced in the location of the den prior to construction. Some areas of the proposed Project (e.g., existing roads or agricultural areas) have been historically subject to human disturbance and dens near these areas are assumed to be accustomed to those previous levels of disturbance. If construction noise and duration are similar to disturbances that would have occurred in the area prior to construction (e.g., vehicular traffic on an existing road), those activities could continue with ongoing monitoring of the den by a biological monitor.
- If construction activities have begun within 100 feet of a potential or atypical den that was determined during pre-construction activities to be inactive when construction began and the den becomes active during construction (i.e., becomes a "known" den), those activities would be allowed to continue at the same intensity as occurred when the den became active. A biological monitor would maintain continual watch on the den while construction activities are conducted within the buffer described above.
- In no case would construction activities, regardless of noise and duration, occur closer than 50 feet from a known or potential/atypical den or 500 feet from a natal/pupping den unless approved by California Department of Fish and Wildlife or United States Fish and Wildlife Service. Evidence that the

construction activities were causing negative changes in behavior patterns would cause the biologist to disallow those activities inside the buffer.

~~If burrowing owls are detected, a Burrowing Owl Management and Relocation Plan shall be prepared by a qualified biologist and reviewed by, and implemented in consultation with, CDFW. Unless otherwise approved by CDFW, disturbance to occupied burrows shall be avoided. Disturbance to suitably sized burrows (>11 cm wide) shall be avoided during the breeding season (February 1 through August 31) unless proven to be unoccupied. Buffers shall be established around occupied burrows in accordance with guidance provided in CDFG's Staff Report on Burrowing Owl Mitigation (CDFG 2012: or most recent guidance). No Project activities shall be allowed to encroach into established buffers without the notification to CDFW. The buffer shall remain in place until it is determined that occupied burrows have been vacated.~~

~~Outside of the nesting season (September 1 through January 31), passive owl relocation techniques as outlined in the Burrowing Owl Management and Relocation Plan shall be implemented with notification to CDFW.~~

As directed above, if the buffers cannot be implemented, the Project proponent will confer with CDFW/USFWS for guidance on appropriate take avoidance measures. If impacts to ~~burrowing owl or~~ San Joaquin kit fox cannot be feasibly avoided, the Project proponent will confer with CDFW/USFWS to determine if take authorization from CDFW/USFWS through the CESA and/or ESA ITP process or other agency-approved method is recommended. ~~If recommended, the ITP or other agency-approved permit shall provide suitable a~~Avoidance and minimization measures set forth in any ITP or other agency-approved permit issued for the project in addition to those set forth in this mitigation measure shall also be implemented. ~~to reduce potential impacts, and adequate mitigation.~~ Mitigation of occupied habitat at a ratio to be determined in consultation with the appropriate agencies may be through on- or off-site preservation with permanent protection and long-term funding, or through purchase of equivalent credits through a mitigation bank if available in addition to implementing all other measures and conditions of the permit.

Section 4.4, Biological Resources, Page 4.4-110 and 4.4-111

MM 4.4-21: Mapped CDFW-designated sensitive communities should be avoided to the maximum extent possible. Any CDFW-designated sensitive communities that are directly and permanently impacted shall be mitigated at a ratio of 2:1 acre on-site ~~or at a nearby location~~ at another location in the same ecoregion with comparable habitat value. Potential mitigation sites will be analyzed to identify the opportunity with the greatest chance for restoration success while minimizing the risk and uncertainty of the mitigation outcomes. An evaluation of mitigation sites includes but is not limited to: an evaluation of hydrology, soil

stability, grading requirements (import/export), and existing on-site vegetation (native and non-native) communities. An evaluation of vegetation will follow CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018) and California Natural Communities List (CDFW 2023), also referred to as the Natural Communities List, based on A Manual of California Vegetation, Online Edition (CNPS 2023). Prior to the issuance of a grading permit for construction and decommissioning activities, if full avoidance of the three CDFW-designated sensitive vegetation communities is not feasible, direct impacts shall be mitigated as follows:

- Direct permanent impacts on up to 192.5 acres of bush seepweed scrub shall be mitigated at a 2:1 ratio (up to 385.0 acres, depending on final impacts)
- Direct permanent impacts on up to 0.2 acres of spinescale scrub shall be mitigated at a 2:1 ratio (up to 0.4 acres, depending on final impacts)
- Direct permanent impacts on up to 12.3 acres of tar plant fields shall be mitigated at a 2:1 ratio (up to 24.6 acres, depending on final impacts)

Impacts shall be mitigated through one or more of the following as determined through consultation with the Kern County Planning and Natural Resources Department: preservation, restoration, enhancement, or establishment/ re-establishment.

Section 4.4, Biological Resources, Page 4.4-113

MM 4.4-26: Prior to the issuance of building and grading permits for Site 6, the project proponent/operator shall mitigate for the loss of Swainson's Hawk foraging habitat for portions of the project site within one mile of an active nest at a 0.5:1 ratio for a total of 605 acres. Mitigation lands may be nested with other compensatory lands provided it meets the necessary biological requirements and as determined by the appropriate wildlife agency. Total compensatory lands may be updated based on any future protocol-level survey and in consultation with the appropriate wildlife agency.

MM 4.4-27: Prior to the issuance of building and grading permits for Site 8, the project proponent/operator shall mitigate for the loss of Swainson's Hawk foraging habitat for portions of the project site within one mile of an active nest at a 0.5:1 ratio for a total of 603 acres. Mitigation lands may be nested with other compensatory lands provided it meets the necessary biological requirements and as determined by the appropriate wildlife agency. Total compensatory lands may be updated based on any future protocol-level survey and in consultation with the appropriate wildlife agency.

Section 4.5, Cultural Resources, Page 4.5-49

MM 4.5-2: Prior to the issuance of any grading or building permit, the project proponent shall submit to the Kern County Planning and Natural Resources Department a Cultural Resources Treatment Plan. The plan shall:

a. Require that prior to conducting initial ground-disturbance in the vicinity of prehistoric archaeological sites, and in coordination with the Lead Archaeologist and Native American Monitor(s), exclusion areas (i.e., the recorded boundaries of the archaeological sites and all areas within 50 feet thereof) shall be temporarily marked with exclusion markers or protective fencing as determined by the Lead Archaeologist in consultation with the Native American Monitor.

b. Previously evaluated archaeological sites and isolates that have been determined not eligible under CEQA for the California Register of Historical Resources will not be included in the exclusion areas.

c. ~~b.~~ Require that the construction zone shall be narrowed or otherwise altered to avoid any exclusion areas.

d. ~~c.~~ Provide an overview of best management practices to be utilized during ground-disturbing construction activities to ensure protection of cultural resources.

e. ~~d.~~ Outline the process for evaluation of any unanticipated cultural discoveries during project construction activities.

f. ~~e.~~ Provide a Data Recovery Plan, if required, prepared by the Lead Archeologist in consultation with the Native American Monitor(s), for the recovery of known and unanticipated cultural discoveries that cannot be avoided or preserved in place.

Section 4.6, Energy, Page 4.6-1

Information contained within this section was primarily provided by the *Final Air Quality, Greenhouse Gas Emissions, and Energy Technical Report*, dated August 2025, which was prepared by Dudek and included as Appendix C.2 of this Draft EIR. Additional information was taken from the Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum for the Buttonbush Solar and Storage Project, dated January 13, 2026, which was prepared by Dudek and included as Appendix N of the Final EIR. The Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum provides updates to the technical report based on comments received during the public comment period for the proposed Project.

Section 4.6, Energy, Page 4.6-9

Petroleum

Gasoline and diesel fuel consumption in on-road vehicles, ~~and~~ off-road mobile equipment, and emergency backup generators was estimated for project construction and operation using CO_2 emissions estimates for the proposed Project and conversion factors from The Climate Registry. Proposed Project information, calculation methodologies, and assumptions used to estimate CO_2 emissions for the proposed Project are described in Section 4.8.4, *Greenhouse Gas Emissions and Global Climate Change, Impacts and Mitigation Measures*. CalEEMod modeling files are available in Appendix A of the *Final Air Quality, Greenhouse Gas Emissions, and Energy Technical Report* (included as Appendix C.2 of this Draft EIR) and Attachment A of the *Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum* (Appendix N).

Fuel consumption was estimated by converting the total CO_2 emissions to gallons using fuel type-specific conversion factors. The conversion factor for gasoline is 8.78 kilograms CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms CO_2 per gallon (The Climate Registry 2023). Emergency backup generators associated with proposed Project operation would be diesel fueled. Heavy-duty construction equipment associated with construction activities and haul trucks involved in importing or exporting material to and from the site were assumed to use diesel fuel. Worker vehicles were assumed to be gasoline fueled, and vendor/hauling vehicles were assumed to be diesel fueled. Grading at the Project site would be balanced and, therefore, no haul trucks would be required for import or export of soils. The movement of soils on site would be accomplished with off-road equipment.

Section 4.6, Energy, Page 4.6-14

Petroleum

During operations, the majority of fuel consumption resulting from the proposed Project would involve the use of motor vehicles traveling to and from the Project site, as well as fuels used for alternative modes of transportation that may be used by residents. There would also be petroleum consumption from the use of the emergency backup generators. ~~Operation of the proposed Project would result in consumption of gasoline and diesel fuel associated with motor vehicles traveling to and from the Project site.~~ The estimated petroleum demand in gallons of gasoline and diesel fuel for project operations is shown in Table 4.6 4: *Annual Petroleum Demand*. Values presented in Table 4.6 4: *Annual Petroleum Demand*, are derived from CO_2 emissions available in the *Final Air Quality, Greenhouse Gas Emissions, and Energy Technical Report* (included as Appendix C.2 of this Draft EIR) and the *Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum* (Appendix N).

Table 4.6-10: Annual Petroleum Demand

Fuel Type	Fuel Quantity (gallons)
Gasoline - Mobile	14,015
Diesel - Mobile	27,429
Diesel – Emergency Generators	43,115
Total	**~~41,444~~84,558**

Source: Dudek 2025, Dudek 2026

Note:

Calculations use unrounded numbers; totals may not appear to sum exactly due to rounding.

As shown in Table 4.6 4: *Annual Petroleum Demand*, the annual petroleum consumption for the proposed Project is estimated to be approximately ~~41,444~~84,558 gallons per year. By comparison, California as a whole consumes approximately 26.4 billion gallons of petroleum per year (EIA 2022). Countywide total petroleum use by on-road vehicles is expected to be 639 million gallons per year by 2025 (CARB 2024).

Section 4.8, Hazards and Hazardous Materials, Page 4.8-1

Information contained within this section was primarily provided by the *Final Air Quality, Greenhouse Gas Emissions, and Energy Technical Report*, dated August 2025, which was prepared by Dudek and included as Appendix C.2 of this Draft EIR. Additional information was taken from the Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum for the Buttonbush Solar and Storage Project, dated January 13, 2026, which was prepared by Dudek and included as Appendix N of the Final EIR. The Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum provides updates to the technical report based on comments received during the public comment period for the proposed Project.

Section 4.8, Hazards and Hazardous Materials, Page 4.8-21

Methodology

The analysis presented within this section is based on both qualitative and quantitative approaches for determining GHG impacts associated with construction and operation of the proposed Project. The findings in the *Final Air Quality, Greenhouse Gas Emissions, and Energy Technical Report* prepared for the proposed Project (Appendix C.2) were used to assess the proposed Project's impacts related to GHG emissions. Supplementary information was taken from the *Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum* for the proposed Project (located in Appendix N of the Final EIR). Additional details regarding data and assumptions used for estimating emissions, including CalEEMod inputs and outputs, can also be found in Appendix C.2: Final Air Quality, Greenhouse Gas Emissions, and Energy Technical Report and Appendix N: *Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum*.

Section 4.8, Hazards and Hazardous Materials, Page 4.8-23

Operation

Emissions from the operational phase of the proposed Project were estimated using CalEEMod Version 2022.1.1.29. Operational year 2030 was assumed consistent with completion of Project construction. CalEEMod was used to estimate potential Project-generated operational GHG emissions from area sources, energy sources, mobile sources, stationary sources, solid waste, refrigerants, water supply, and wastewater treatment. The methodologies used to estimate emissions from each source category are discussed below.

Section 4.8, Hazards and Hazardous Materials, Page 4.8-23

...CalEEMod default values for emission factors (grams per square foot of building space per day) and the number of summer days (when landscape maintenance would generally be performed) and winter days.

~~Portable electrical generators that meet local and State emission controls would be used during emergency situations only for temporary back-up power. As such, emissions from the temporary use of emergency generators during proposed Project operation are expected to be minimal and were not quantified.~~

Section 4.8, Hazards and Hazardous Materials, Page 4.8-24

...CalEEMod default vehicle emission factors and vehicle fleet mix for 2030 were used to estimate emissions associated with vehicular sources.

Stationary Sources

Up to 10 emergency backup generators could be implemented and utilized during operation of the proposed Project. These backup generators would be installed for redundant permanent power for the O&M buildings, onsite substations and/or battery energy storage system facilities. It was assumed that the generators would be rated EPA Tier 3 and 568 horsepower (Generac 2015). It was assumed that each generator would be operated up to 2 hours per day and 200 hours per year. CalEEMod was used to estimate emissions from operation of the emergency generators.

Section 4.8, Hazards and Hazardous Materials, Page 4.8-29

Operations

Operation of the proposed Project would generate GHG emissions from: passenger vehicle and delivery truck trips to, and from, the Project site; area sources, including landscape maintenance equipment operation and SF6 leakage from substations; energy use (generation of electricity consumed by the proposed Project); stationary sources (operation of emergency backup generators); water use; solid waste disposal; and refrigerants. CalEEMod and a spreadsheet model were used to calculate the annual GHG emissions based on the operational assumptions described

in Section 4.8.4, Impacts and Mitigation Measures, Methodology, Operation. The estimated operational Project-generated GHG emissions are shown in Table 4.8 5: Summary of Estimated Annual Operational Greenhouse Gas Emissions.

Table 4.8-11: Summary of Estimated Annual Operational Greenhouse Gas Emissions

Emissions Source	GHG Emissions (MT CO_2e)
Mobile	417.46
Area	44.44
Energy	8,247.80
Stationary	441.67
Water	4.08
Waste	20.28
Refrigerants	2.16
Total Operational Emissions	**~~8,736.22~~9,177.89**
Amortized Construction and Decommissioning Emissions (over 35 years)	*1,094.33*
Project Operation + Amortized Construction Total	**~~9,830.55~~10,272.22**

Source: Dudek 2025, Dudek 2026

Note:

Calculations use unrounded numbers; totals may not appear to sum exactly due to rounding.

Key: GHG = greenhouse gas; MT CO_2e = metric tons of carbon dioxide equivalent

As shown in Table 4.8-5: Summary of Estimated Annual Operational Greenhouse Gas Emissions, estimated annual Project-generated GHG emissions would be approximately 10,272 ~~9,831 MT~~ CO_2e per year as a result of proposed Project operations and amortized construction and decommissioning.

Section 4.8, Hazards and Hazardous Materials, Page 4.8-29 and 4.8-30

Avoided GHG Emissions

The proposed Project would provide a source of renewable energy to support statewide RPS targets of 60 percent by 2030 and 100 percent by 2045, consistent with the renewable energy targets in the Scoping Plan and required by Senate Bill (SB) 100 and EO B-55-18. The generation of renewable energy would displace GHG emissions that would otherwise be generated by fossil-fuel power plants. As described above, the proposed Project would generate approximately ~~9,831~~10,272 MT CO_2e per year.

According to PVWatts, the proposed Project is expected to produce an estimated 3,390,332 megawatt-hours of electricity per year. The default CalEEMod CO_2e emission factor for PG&E was 206 pounds of CO_2e per megawatt-hour from 2019 (CAPCOA 2022). For purposes of analysis, it was assumed that PG&E would meet the EO B-55-18 carbon neutrality target in 2045 with or without the proposed Project, reducing the CO_2e emission factor for PG&E to 0 pounds of CO_2e per megawatt-hour in 2045. The actual timing of the progression from the current power mix to 100 percent renewable energy is unknown at this time, so the analysis assumed a linear reduction.

As a result, the analysis credits the proposed Project with avoiding less GHG emissions over time given the overall statewide shift to renewable energy.

Based on these assumptions, the proposed Project would avoid a total of 1,461,746 MT CO_2e from 2030 through 2044. Accounting for 35 years of the total annual operational and amortized construction and decommissioning emissions shown in Table 4.8 5: Summary of Estimated Annual Operational Greenhouse Gas Emissions, the proposed Project would emit approximately ~~344,069~~359,528 MT CO_2e during operation. Therefore, the proposed Project would avoid a net ~~1,117,677~~1,102,218 MT CO_2e over its lifetime. While the proposed Project is expected to be operational at least through 2065, it would no longer displace GHG emissions that would otherwise be generated by fossil-fuel power plants after the state achieves 100 percent renewable energy in 2045. Additionally, the solar energy provided by the project is a much cleaner source of energy than traditional sources used for the generation of electricity, such as the burning of coal, fuel oil, or natural gas. This clean energy source is considered a best performance standard (BPS) for electricity generation. Projects implementing BPS for GHG would be determined to have a less-than-significant impact (SJVAPCD 2009b).

Section 4.8, Hazards and Hazardous Materials, Page 4.8-31

Summary

Although the proposed Project would generate GHG emissions during construction, operations, and decommissioning, it would provide a source of renewable energy that would avoid significantly more GHG emissions that otherwise would be generated by fossil-fuel power plants. Though the analysis shows that this would be the case without application of any mitigation, Mitigation Measure MM 4.3-5 targeting criteria air pollutant emissions would have the additional benefit of decreasing GHG emissions. Over its lifetime, the proposed Project would avoid an estimated net ~~1,117,677~~1,102,218 MT CO_2e. Furthermore, the proposed Project would contribute to achieving the state's RPS goals and would not conflict with state goals to reduce GHG emissions. Therefore, the proposed Project would generate less-than-significant GHG-related impacts.

Section 4.8, Hazards and Hazardous Materials, Page 4.8-47

As shown in Table 4.8 5: *Summary of Estimated Annual Operational Greenhouse Gas Emissions*, estimated annual Project-generated GHG emissions would be approximately ~~9,831~~10,272 MT CO_2e per year as a result of project operations and amortized construction and decommissioning. Although the proposed Project would result in a contribution to cumulative GHG emissions in California, operation of the proposed Project would displace emissions from the electricity generation sector through generation of renewable energy, which would avoid GHG emissions that otherwise would be generated by fossil-fuel power plants. As described under Impact 4.8-1, the proposed Project would avoid a net ~~1,117,677~~1,102,218 MT CO_2e over its lifetime. Thus, the proposed Project would not have a cumulatively considerable impact on global climate change, and cumulative impacts would therefore be less than significant.

Section 4.8, Hazards and Hazardous Materials, Page 4.8-48

Summary

As stated above, although the proposed Project will generate GHG emissions primarily during construction and decommissioning which in combination with GHG emissions from other sources will contribute to climate change, operation of the proposed Project would avoid GHG emissions that otherwise would be generated by fossil-fuel power plants—namely, a net ~~1,117,677~~1,102,218 MT CO_2e over its lifetime. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact regarding global climate change.

Section 4.9, Hazards and Hazardous Materials, Page 4.9-30

The purpose of the Kern County Airport Land Use Compatibility Plan (ALUCP) is to establish procedures and criteria by which Kern County and the affected incorporated cities can address compatibility issues when making planning decisions regarding airports and military operations areas and the land uses around them. In general, the ALUCP describes and maps influence areas in the vicinity of public use airports in Kern County where development restrictions are established to prevent the construction or placement of structures or objects which may be an obstruction to air navigation. The ALUCP covers airports in the unincorporated portions of the County and the affected incorporated cities of Bakersfield, California City, Delano, Shafter, Taft, Tehachapi, and Wasco. The ALUCP was last updated in 2012. As required by Aeronautics Law, Public Utilities Code (Chapter 4, Article 3.5), 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.

As defined in the Kern County Code of Ordinances 19.04.030, a “private airport” is a private airport or airstrip intended for the sole use of the airport owner and his or her invitees. Kern County Code of Ordinances 19.04.033 defines a “public use airport” as a publicly or privately owned airport that offers the use of its facilities to the public without prior notice or special invitation or clearance, and that has been issued a California Airport Permit by the Division of Aeronautics of the California Department of Transportation.

The nearest public airports are the Elk Hills – Buttonwillow Airport, located at Buttonwillow, California, approximately 3.5 miles (at the closest point) south of the Project site, and the Wasco-Kern County Airport located 14101 Airport Road, Wasco, California 93280, approximately 7.8 miles (at the closest point) northeast of the Project site. The proposed Project is not within either airports’ ALUCP-defined Airport Influence Area. (Figure 3.9: Airport Land Use Compatibility Map, in Chapter 3.0, Project Description, that illustrates the Project site in relation to these airports.)

Section 4.9, Hazards and Hazardous Materials, Page 4.9-38

Site-specific accidental spills could include accidental release of oil from any uncapped wells exposing construction workers to the dangers associated with construction near oil wells. According to the Phase I ESA (Appendices H.1 and H.2 of this Draft EIR), multiple oil wells (plugged, cancelled, and idle) exist on Sites 1, 4, and 8. The CalGEM letter, dated December 2, 2025 (Comment Letter No. 2, below) provides information regarding wells that are reported to be located within and nearby the Project site.

Section 4.9, Hazards and Hazardous Materials, Page 4.9-45

Impact 4.9-5: For a Project located within the adopted Kern County Airport Land Use Compatibility Plan, would the Project result in a safety hazard or excessive noise for people residing or working in the Project site?

The nearest public airports to the Project site are the Elk Hills – Buttonwillow Airport, located at Buttonwillow, California, approximately 5.3 miles (at the closest point, excluding the Midway Substation site which is discussed below) south of the proposed Project site, and the Wasco-Kern County Airport located at 14101 Airport Rd, Wasco, CA 93280, California 93263, approximately 7.8 miles (at the closest point) northeast of the proposed Project site. There are two private airports near the Project site which do not have a supporting ALUCP: 1) a paved agricultural airstrip located outside Site 2 north of Snow Road, just west of APN 100-020-19, and east of the East Side Canal, and 2) a paved agricultural airstrip outside Site 8 between Merced Avenue and Lerdo Highway, and between Wildwood Road and Rowlee Road, bordering the northern edge of APN 087-060-39.

The proposed Project does not involve the development of housing which could place residents within an area associated with a safety hazard or excessive noise regarding an airport's operations. Further, the proposed Project site is not located within any safety or noise contour zones for these airports or within any designated airport land use plan areas. Safety hazards are not anticipated for people working at the Project site with respect to the proposed Project's proximity to an airport.

Section 4.11, Land Use and Planning, Page 4.11-10

A number of active oil and gas wells are located within the Project site. However, the proposed Project includes a 10-foot no-build setback around all existing oil and gas wells and provides drilling areas of suitable size and access from within the Project site. Additionally, Mitigation Measure MM 4.12-1 requires the Project proponent to provide documentation from any minerals right holders who agree to development activities ~~to allow the placement of solar panels~~ in areas that could affect their ability to exercise their mineral rights.

Section 4.12, Mineral Resources, Page 4.12-6

Table 4.12-2: *Mines* ~~Miles~~*Within the Project Vicinity,* includes other active mines within the project vicinity and are primarily located south and west of the Project site.

Section 4.13, Noise, Page 4.13-34

Impact 4.13-4: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project expose people residing or working in the Project site to excessive noise levels?

The Project site is not located within 2 miles of a public airport or ~~private airstrip~~. As discussed in Section 4.9, Hazards and Hazardous Materials, the nearest public airport to the Project site is the Elk Hills-Buttonwillow Airport, approximately 5 miles (at the closest point, excluding the Midway Substation site which is discussed below) southwest of the Project site boundary. There are two private airports near the Project site which do not have a supporting ALUCP: 1) a paved airstrip located outside Site 2 north of Snow Road, just west of APN 100-020-19, and east of the East Side Canal, and 2) a paved airstrip outside Site 8 between Merced Avenue and Lerdo Highway, and between Wildwood Road and Rowlee Road, bordering the northern edge of APN 087-060-39. Additionally, the Project site is not located within any safety or noise contour zone for either airport and is not located within a designated Kern County ALUCP. No impact would occur.

Midway Substation Upgrades

The nearest airport to the Midway Substation site is the Elk Hills – Buttonwillow Airport, located at Buttonwillow, California, approximately 3.5 miles south/southwest of the proposed Project site. The Midway Substation site is not located within any safety or noise contour zones for the Elk Hills – Buttonwillow Airport or any other public airport and is not within a designated airport land use plan area. A private airstrip is located approximately 2.3 miles northwest of the Midway Substation: north of Snow Road just west of APN 100-020-19 outside Buttonbush Site 2, east of the East Side Canal.

Summary

While the there are two private agricultural airstrips adjacent to Site 2 and Site 8, ~~T~~the proposed Project is not located within any safety or noise contour zones for airports, any designated airport land use plan areas, or 2 miles of a public airport or public use airport. Therefore, there would be no impact.

Section 4.15, Transportation, Page 4.15-5

A number of private airstrips are located throughout western Kern County, including Tejon Ag and Paradise Lakes airfields south of Bakersfield, Majors Airfield north of Bakersfield, Joe Gottlieb Field Airport west of Bakersfield, and Cashen Airport northwest of Wasco. ~~There are no private airports within the vicinity of the Project site (AirNav n.d.).~~ There are two private agricultural airstrips near the Project site which do not have a supporting ALUCP: 1) a paved airstrip located outside Site 2 north of Snow Road, just west of APN 100-020-19, and east of the East Side Canal, and 2) a paved airstrip bordering the northern edge of APN 087-060-39 outside Site 8 between Merced Avenue and Lerdo Highway, and between Wildwood Road and Rowlee Road.

Section 4.17, Utilities and Service Systems, Page 4.17-9

The California Public Utilities Commission regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. It is tasked with ensuring safe, reliable utility service is available to consumers, setting retail energy rates, and protecting against fraud.

The California Public Utilities Commission has exclusive jurisdiction over the PG&E's facilities identified in the project description, including PG&E's proposed upgrades to the Midway Substation, communication infrastructure, and transmission line to the Point of Change or Ownership. This EIR addresses potential impacts of the proposed Project as a whole, which includes PG&E's proposed construction activities throughout the impact analysis section of each EIR chapter. The EIR recommends standard mitigation measures to address construction impacts while also acknowledging that PG&E already incorporates standard Best Management Practices (BMPs) into its construction practices that similarly mitigate the environmental impacts of the upgrades. The proposed Midway substation upgrades are minor in nature, and implementation of PG&E's BMPs are appropriate to reduce project impacts on CPUC oversight portions of the proposed Project to less than significant levels.

Section 4.17, Utilities and Service Systems, Page 4.17-33

MM 4.17-1: Prior to the issuance of a building permit for an O&M building that includes facilities the use of which will generate wastewater requiring sanitary disposal (e.g., restrooms), the method of sewage disposal shall be as required and approved by the Kern County Public Health Services Department. Compliance with this requirement will necessitate that the project proponent obtain the necessary approvals for the design of the septic system from the Kern County Engineering, Surveying and Permit Services Department. The septic system disposal field shall be located a minimum of 100 feet from a classified stream, or 25 feet from a non-classified stream as defined in the Kern County Onsite Systems Manual (Kern County 2016), and shall not be located where it would impact State wetlands or special-status plant species.

Chapter 5, Consequences of Project Implementation, Page 5-5

5.4 PG&E's Midway Substation Upgrades

The California Public Utilities Commission has exclusive jurisdiction over the PG&E's facilities identified in the project description, including PG&E's proposed upgrades to the Midway Substation, communication infrastructure, and transmission line to the Point of Change of Ownership. This EIR addresses potential impacts of the proposed Project as a whole, which includes PG&E's proposed construction activities throughout the impact analysis section of each EIR chapter. The EIR recommends standard mitigation measures to address construction impacts while also acknowledging that PG&E already incorporates standard Best Management Practices (BMPs) into its construction practices that similarly mitigate the environmental impacts of the upgrades. The proposed Midway substation upgrades, communication infrastructure, and

transmission line are minor in nature, and implementation of PG&E's BMPs are appropriate to reduce project impacts on CPUC oversight portions of the proposed Project to less than significant levels.

Chapter 6, Alternatives, Page 6-13
Table 6-1, Alternative 4

- Avoids need for solar facility CUP, GPAs, SPA, and WALUC cancellations
- Avoids significant and unavoidable impacts regarding aesthetics and visual resources, agricultural resources, air quality, biological resources, mineral resources, and wildfire
- Less impacts regarding cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality (except for groundwater resources), land use and planning, public services, transportation, tribal cultural resources, and~~—~~except for groundwater~~—~~utilities and service systems
- Greater impacts regarding energy, GHGs, and groundwater
- Does not meet all project objectives nor does this alternative account for the energy storage component of the project

Chapter 6, Alternatives, Page 6-14
Table 6-1, Alternative 5

- Avoids need for cancellation of active Farmland Security Zone and WALUCs
- Greater impacts regarding energy, GHGs, and groundwater
- Less impacts regarding all other remaining environmental issues areas
- Decreased GHG offset benefits to meet Project proponent's proposed Project objectives
- Does not meet all of the project objectives

Chapter 6, Alternatives, Page 6-48

The Reduced Acreage Alternative would achieve all the Project objectives listed above in Section 6.3 ~~6.2~~, albeit to a lesser degree as compared to the proposed Project due to the reduction in the reduction in total solar energy generation and storage capacities.

Chapter 6, Alternatives, Page 6-59

The No Ground-Mounted Utility-Solar Development Alternative would partially fulfill the objectives outlined in Section 6.3 ~~6.2~~, Project Objectives. This alternative would involve the installation of small to medium scale PV solar facilities, which would contribute to the generation of renewable energy and support the County's broader goals for solar energy development and GHG reduction

Chapter 6, Alternatives, Page 6-74

The Non-Williamson Act and Farmland Security Zone Parcels Alternative would achieve all the Project objectives listed above in Section 6.3 ~~6.2~~, yet to a substantially lesser degree as compared to the proposed Project due to the reduction in total solar energy production and storage capabilities.

Chapter 10, Bibliography, Page 10-16

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7.2 Response to Comments

7.2.1 State Agencies

1: California Department of Fish and Wildlife

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

December 29, 2025

Jack Foster
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Subject: **Buttonbush Solar Project (Project)**
Draft Environmental Impact Report (DEIR)
State Clearinghouse No. 2024041028

Dear Jack Foster:

The California Department of Fish and Wildlife (CDFW) received a DEIR from Kern County, as Lead Agency, for the Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code. 1-A

CDFW Ecological Reserves: Fish and Game Code section 1583 states "Except in accordance with the regulations of the commission it is unlawful to enter upon any ecological reserves established under the provisions of the article, or to take therein any bird or the nest or eggs thereof, or any mammal, fish, mollusks, crustaceans, amphibia, reptiles or any other form of plant or animal life." In addition, California Code of Regulations, Title 14, Section 630 states "All ecological reserves are maintained for the primary purpose of developing a statewide program for protection of rare, threatened, or endangered native plants, wildlife, aquatic organisms, and specialized terrestrial or aquatic habitat types", and therefore, any other activity on these lands is restricted. 1-B

Fully Protected Species: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians and reptiles, and fish, pursuant to Fish and Game Code sections

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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3511, 4700, 5050, and 5515. Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except as follows:

- Take is for necessary scientific research,
- Efforts to recover a fully protected, endangered, or threatened species, live capture, and relocation of a bird species for the protection of livestock, or
- They are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (Fish & G. Code, §§ 3511, 4700, 5050, & 5515).

1-B

Additionally, specified types of infrastructure projects may be eligible for an Incidental Take Permit (ITP) for unavoidable impacts to fully protected species if certain conditions are met (see Fish & G. Code §2081.15). Project proponents should consult with CDFW early in the project planning process if an ITP may be pursued for the Project.

Nesting Birds: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include, sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

Unlisted Species: Species of plants and animals need not be officially listed as Endangered, Rare, or Threatened (E, R, or T) on any State or federal list to be considered E, R, or T under CEQA. If a species can be shown to meet the criteria for E, R, or T, as specified in the CEQA Guidelines section 15380, CDFW recommends it be fully considered in the environmental analysis for the Project.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

1-C

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may

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need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

1-C cont.

As a responsible agency, CDFW is responsible for providing, as available, biological expertise during public agency environmental review efforts (e.g., CEQA), focusing specifically on project activities that have the potential to adversely affect fish and wildlife resources. CDFW provides recommendations to identify potential impacts and possible measures to avoid or reduce those impacts.

PROJECT DESCRIPTION SUMMARY

Proponent: 29SC 8me, LLC

Objective: The Project proposes to construct a photovoltaic (PV) solar facility with associated infrastructure on seven proposed Project locations (Project Sites) that would collectively generate up to 2 gigawatts (GW) of alternating current (AC) power with an up to 2 GW energy storage system. The Project would be supported by a 500-kilovolt (kV), overhead gen-tie and/or underground electrical transmission line(s) originating from one or more on-site substations and terminating at the Pacific Gas & Electric (PG&E) Midway Substation. The Project's permanent facilities would include solar panels, solar racking, inverters, service roads, a power collection system, communication cables, overhead and underground transmission lines, electrical switchyards, Project substations, energy storage system(s), and operations and maintenance (O&M) facilities.

1-D

Location: The Project is located on 128 parcels across approximately 11,983 acres of privately owned land in the valley portion of Kern County. The Project straddles Interstate 5 (I-5), is east of Buttonwillow Raceway Park, just north of Highway 58, and south of Kimberlina Road, with the majority of the site being on the northeastern side of I-5. The eastern section of the Project is approximately six miles west of the City of Shafter, while the northern section is approximately 5.5 miles southwest of the City of Wasco. The southern section of the Project has I-5 running through its northern edge and its southern edge is within the Buttonwillow Community Development Plan. The Project is within the Mount Diablo Base and Meridian (MDB&M).

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COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist Kern County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the DEIR. 1-E

PG&E Midway Substation and Transmission Line

The DEIR included an evaluation for the PG&E Midway Substation improvements and concluded that potential impacts to biological resources would be less than significant with the implementation of PG&E's Best Management Practices (BMPs). The DEIR also stated that, "PG&E should implement the mitigation measures described above, during proposed Project construction, operation and maintenance, and decommissioning" to mitigate for potential significant impacts. CDFW is concerned that PG&E's proposed BMPs are not adequate to reduce impacts to less than significant and avoid unauthorized take for certain special-status species, particularly for the State endangered and fully protected and federally endangered blunt-nosed leopard lizard (*Gambelia sila)* and the State candidate western burrowing owl (*Athene cunicularia hypugaea*). As such, CDFW recommends that the mitigation measures outlined in the DEIR, with the comments and recommendations provided below, be incorporated for the PG&E Midway Substation improvements as well. 1-F

Project Transmission Line

The DEIR also noted that the transmission line for the Project would be constructed within an approximately 200-foot wide transmission line corridor, with portions of this work occurring directly adjacent to the Buttonwillow Ecological Reserve. Additionally, there is some ambiguity on the placement of the transmission line adjacent to the Buttonwillow Ecological Reserve as several sections of the DEIR state that, "Furthermore, several collector lines are proposed along areas of saltbush scrub and alkali sink, including the Buttonwillow Ecological Reserve along 7th Standard Road". CDFW would like to reiterate, as outlined in Fish and Game Code section 1583 and California Code of Regulations, Title 14, Section 630, that ecological reserves are maintained for the primary purpose of protecting sensitive biological resources and their associated habitats, and any other activity on these lands, such as transmission line construction, is prohibited. 1-G

Proximity of CDFW Ecological Reserves

While the majority of Project facilities have been sited in disturbed agricultural lands which reduces the potential for potential impacts to biological resources, the DEIR notes that several Project parcels, including parcels within Project Sites 3, 5, 6, and 8, are in 1-H

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close proximity to CDFW's Buttonwillow Ecological Reserve, Lokern Ecological Reserve, and Semitropic Ecological Reserve (collectively, Ecological Reserves). These Ecological Reserves, also identified as key lands for potential species recovery (USFWS 1998), provide habitat for a number of State and federal special-status species and increase the likelihood that special-status species could utilize the habitats within the Project over the life of the Project. Further, many of the Ecological Reserve parcels were acquired as threatened and endangered species mitigation lands for projects such as residential development projects under the Metro Bakersfield Habitat Conservation Plan. CDFW recommends that Project facilities within Project parcels with Ecological Reserve adjacency designed and sited to minimize indirect impacts to the Ecological Reserves to the extent feasible and that a sufficient permanent buffer be incorporated between all Project elements and the Ecological Reserve parcels. Any direct impacts to the Ecological Reserves are prohibited.

1-H cont.

Wildlife Movement and Connectivity

The Project and vicinity supports significant biological resources and contains habitat connections and supports movement across the broader landscape, including the aforementioned Ecological Reserves, sustaining both transitory and permanent wildlife populations. It is imperative that this connectivity be maintained, particularly between the Ecological Reserves and surrounding natural habitats to allow for movement of species between blocks of land (USFWS 1998). While the seven Project Sites appear to be spaced around the Buttonwillow Ecological Reserve, and the DEIR notes that permanent perimeter fencing would be installed with a four (4) to six (6) inch gap for permeability, it does not appear that array configurations within the Project Sites (including Project Sites 3, 5, 6 and 8) are designed to facilitate wildlife movement. As the overall size of the Project and siting of Project Sites between Ecological Reserves has the potential to impact connectivity for wildlife within the Project vicinity, CDFW recommends the Project consider additional design measures to enhance and facilitate movement through the Project, such as incorporating corridors within certain Project Sites, as well as considering modifications to siting, size, or configuration of arrays.

1-I

Compensatory Mitigation and CDFW Consultation

The DEIR notes that several State listed species were documented within the Project, including the State and federally endangered Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), the State threatened Swainson's hawk (*Buteo swainsoni*), and the State candidate western burrowing owl and Crotch's bumble bee (*Bombus crotchii*), and several other State listed species have the potential to occur, including the State and federally endangered giant kangaroo rat (*Dipodomys ingens*), the State endangered and fully protected and federally endangered blunt-nosed leopard lizard, the State threatened San Joaquin [Nelson's] antelope squirrel (*Ammospermophilus nelsoni*), and the State threatened and federally endangered San Joaquin kit fox

1-J

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(*Vulpes macrotis mutica*). CDFW has had early discussions with the Project proponent about obtaining an ITP, pursuant to Fish and Game Code section 2081(b), for Project activities.

CDFW typically requires compensatory mitigation in ITPs to fully mitigate Project impacts to covered species. Due to the proposed Project-related impacts to listed species, the siting of certain Project parcels adjacent to the aforementioned Ecological Reserves, and the overall size of the Project, the Project would likely require the need for a robust mitigation strategy that incorporates the careful siting of conserved lands within areas that provide substantial uplift to covered species and covered species connectivity. Additionally, due to the complexity in acquiring suitable mitigation for endangered species such as Tipton kangaroo rat, CDFW strongly recommends the Project proponent develop and provide a detailed and specific mitigation proposal during the ITP application process, if take coverage is to be obtained. This mitigation proposal should prioritize land acquisition and conservation within suitable habitats for covered species and in areas that enhance wildlife connectivity. Examples of appropriate conservation areas include lands between the aforementioned Ecological Reserves and other conserved and natural lands, such as the Elk Hills Conservation Area, Kern Water Bank Mitigation Bank, Coles Levee Ecosystem Preserve, and Lokern Natural Area. CDFW also recommends that the Project proponent consider whether it is feasible to permanently conserve parcels within the higher quality habitats located within certain proposed Project Sites, including within Project Sites 3, 5, 6, and 8; which could be part of the overall Project mitigation strategy. Finally, CDFW recommends the Project proponent consult with CDFW early in the ITP application process to assist with the development of an adequate mitigation strategy well in advance of submittal of an ITP application. 1-J

Special-status Species

Currently, the DEIR acknowledges that the Project is within the geographic range of several special-status plant and animal species and proposes specific mitigation measures to reduce impacts for these species to a less than significant level. CDFW concurs with the proposed mitigation measures for the State threatened tricolored blackbird (*Agelaius tricolor*); the State species of special concern American badger (*Taxidea taxus*); the State species of special concern and federally endangered Buena Vista Lake ornate shrew (*Sorex ornatus relictus);* the State species of special concern San Joaquin pocket mouse (*Perognathus inornatus*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), loggerhead shrike (*Lanius ludovicianus*), northern harrier (*Circus cyaneus*), Bakersfield legless lizard (*Anniella grinnelli*), Blainville's horned lizard (*Phrynosoma blainvilli*), California glossy snake (*Arizona elegans occidentalis*), and San Joaquin coachwhip (*Masticophis flagellum*); the State species of special concern and federally proposed threatened western spadefoot toad (*Spea hammondii*); and the State special animal and federally threatened vernal pool fairy 1-K

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shrimp (*Branchinecta lynchi*). CDFW recommends the measures for these species be included within the Final Environmental Impact Report (FEIR).

CDFW has concerns about the ability of some of the proposed mitigation measures to reduce impacts to less than significant and avoid unauthorized take for giant kangaroo rat, Tipton kangaroo rat, blunt-nosed leopard lizard, San Joaquin antelope squirrel, San Joaquin kit fox, Swainson's hawk, western burrowing owl, and Crotch's bumble bee. CDFW also has concerns about the ability of some of the proposed mitigation measures to reduce impacts to less than significant and avoid unauthorized take for several special status plant species including, but not limited to, the California Rare Plant Rank 1B.1 Alkali-sink goldfields (*Lasthenia chrysantha*); the CRPR 1B.2 heartscale (*Atriplex cordulata* var. *cordulata*); the federally endangered and CRPR 1B.2 kern mallow (*Eremalche parryi* ssp. *kernensis*); and the CRPR 1B.1 lesser saltscale (*Atriplex minuscula*). 1-K cont.

Giant Kangaroo Rat and Tipton Kangaroo Rat

Mitigation Measure (MM) 4.4-15 is included in the DEIR to mitigate for impacts to giant kangaroo rat (GKR) and Tipton kangaroo rat (TKR). As TKR was identified during trapping efforts to inform the DEIR in 2024 and GKR are known to occur within the vicinity of Project Sites 1, 2, 3, and 4 (west of I-5), CDFW recommends that the Project proponent consult with CDFW to determine whether avoidance is feasible. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA. 1-L

Blunt-nosed Leopard Lizard, San Joaquin Kit Fox, and San Joaquin Antelope Squirrel

While the DEIR notes that blunt-nosed leopard lizard (BNLL), San Joaquin kit fox (SJKF), and San Joaquin Antelope Squirrel (SJAS) were not detected during previous reconnaissance surveys to inform the DEIR, these species are known to occur within the Project and Project vicinity, including on the Ecological Reserves directly adjacent to portions of the Project. MMs 4.4-11, 4.4-15, and 4.4-16 are provided to mitigate for potentially significant impacts to these species. CDFW concurs with these measures and recommends they be included within the FEIR. However, due to the proximity of the abovementioned Ecological Reserves to the Project, and the likelihood that these species would utilize the habitats within the Project over the life of the Project, CDFW recommends that the Project proponent consult with CDFW to determine whether avoidance is feasible. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA. 1-M

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Western Burrowing Owl

The California Fish and Game Commission (FGC) approved western burrowing owl (BUOW) as a candidate for potential listing as a protected species under CESA on October 10, 2024, and published these findings in the California Regulatory Notice Register (Notice Register) on October 25, 2024. As such, BUOW is now a candidate under CESA and receives the same legal protection afforded to an endangered or threatened species (Fish & G. Code, §§ 2074.2 & 2085).

The DEIR notes that the Project and vicinity contain suitable BUOW habitat and BUOW observations were noted in Sites 2 and 5 during 2024 BUOW reconnaissance surveys. Currently the DEIR provides MM 4.4-13 and 4.4-16 to mitigate for potential significant impacts to BUOW. MM 4.4-16 and MM 4.4-13 include preconstruction surveys as well as BUOW avoidance and minimization measures, including no-disturbance buffers for active burrows, as well as passive relocation or visual buffering for inactive burrows.

CDFW concurs with the avoidance buffers included in MM 4.4-13 and MM 4.4-16 for avoidance of active BUOW burrows during the nesting season. However, CDFW does not concur that the portions of MM 4.4-13 and MM 4.4-16 describing visual buffers or passive relocation of active burrows outside of the nesting season are sufficient to reduce impacts to BUOW to a less than significant level and prevent unauthorized take. In particular, the implementation of passive relocation measures outlined in MM 4.4-13 and MM 4.4-16 would have a strong likelihood to result in the direct unauthorized take of the species absent an ITP. Due to the documented occurrence of BUOW within the Project, the proximity of the Project to the Ecological Reserves, and the presence of suitable BUOW habitat throughout the Project Sites, CDFW recommends that the Project proponent consult with CDFW to determine whether avoidance is feasible. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA.

1-N

In addition to the consultation recommendation above, CDFW also recommends MM 4.4-13 and MM 4.4-16 be modified to include the following:

Recommended Mitigation Measure 1: BUOW Preconstruction Surveys

CDFW recommends that focused surveys, following the 2012 Staff Report on Burrowing Owl Mitigation (2012 Staff Report) (CDFG 2012), be conducted the survey season immediately prior to construction. Please note that the 2012 Staff Report necessitates multiple surveys prior to the initiation of construction.

1-O

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Recommended Mitigation Measure 2: BUOW Avoidance Buffer

Should a BUOW or known BUOW burrow (active or inactive) be detected, either during preconstruction surveys or construction activities, CDFW recommends that no-disturbance buffers, as outlined in the 2012 Staff Report on Burrowing Owl Mitigation (CDFG 2012), be implemented prior to and during any ground-disturbing activities. CDFW also recommends that these buffers be implemented for both wintering and breeding BUOW.

Recommended Mitigation Measure 3: BUOW Take Authorization

If a BUOW or known BUOW burrow (active or inactive) is detected, and the no-disturbance buffers outlined in the 2012 Staff Report on Burrowing Mitigation are not feasible, consultation with CDFW is warranted to discuss how to implement the Project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA.

1-O

Swainson's Hawk

The DEIR notes that 33 Swainson's hawk (SWHA) individuals were observed foraging during biological reconnaissance surveys conducted in 2024, although no SWHA nests were observed within the Project Sites, with the closest nest being observed approximately 3.5 miles southwest of the site. The SWHA habitat assessment, included as Appendix D to the DEIR, notes suitable SWHA nesting habitat and low to moderate quality foraging habitat is present throughout the site, with some areas of moderate to high quality foraging habitat located within the less disturbed grassland areas of the site.

Currently, MM 4.4-12 is proposed to mitigate for potentially significant impacts to SWHA and includes protocol surveys adhering to the methodology developed by the SWHA Technical Advisory Committee (SWHA TAC 2000) and avoidance buffers if any SWHA nests are found. CDFW concurs with these measures and recommends they be included in the final EIR. CDFW also recommends the following in addition to the surveys and avoidance buffers described in MM 4.4-12:

1-P

Recommended Mitigation Measure 4: SWHA Foraging Habitat Mitigation

CDFW recommends compensation for the loss of SWHA foraging habitat as described in CDFW's "Staff Report Regarding Mitigation for Impacts to Swainson's Hawks" (CDFG 1994) to reduce impacts to foraging habitat to less than significant. The Staff Report recommends that mitigation for habitat loss occur within a minimum distance of 10 miles from known nest sites. CDFW has the following recommendations based on the Staff Report:

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- For projects within 1 mile of an active nest tree, a minimum of 1 acre of habitat management (HM) land for each acre of development is advised.
- For projects within 5 miles of an active nest but greater than 1 mile, a minimum of ¾ acre of HM land for each acre of development is advised.
- For projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree, a minimum of ½ acre of HM land for each acre of development is advised.

1-P cont.

Crotch's Bumble Bee

MM 4.4-8 states that a preconstruction survey for Crotch's bumble bee (CBB) would be conducted during the primary flight period for workers and males. MM 4.4-8 also notes that if a nest is found during surveys, "If nest resources occupied by Crotch's bumble bee are detected within the project areas, no ground disturbing activities shall occur within 100 feet of the occupied nest resources, or as determined by a qualified biologist through evaluation of topographic features or distribution of floral resources. The nest resources shall be avoided for the duration of the Crotch's bumble bee nesting period (February 1 through October 31). Outside of the nesting season, it is assumed that no live individuals would be present within the nest, because the daughter queens (gynes) usually leave by September, and all other individuals (original queen, workers, males) die. The gynes are highly mobile and can independently disperse to outside the project footprint to the proposed open space or other suitable areas beyond that have suitable hibernaculum resources. Because construction will have occurred in the area outside the occupied nesting resources, no suitable habitat will be present in the impact area, and it is assumed that new queens will disperse to habitat outside the project areas." CDFW does not concur that MM 4.4-8, which only requires a single preconstruction survey prior to construction, is sufficient to mitigate for potential significant impacts to CBB and prevent unauthorized take. It is also important to note that the removal of suitable habitat around an active avoided nest, without careful consideration of the floral resources necessary to sustain an actively nesting colony, has a strong likelihood of resulting in the unauthorized take of CBB absent an ITP. As such, CDFW recommends MM 4.4-8 be modified to include the following:

1-Q

Recommended Mitigation Measure 5: CBB Surveys

CDFW recommends that a qualified biologist conduct focused surveys for CBB, and their requisite habitat features following the methodology outlined in the Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023).

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Recommended Mitigation Measure 6: CBB Avoidance

If CBB is detected, CDFW recommends that all small mammal burrows and thatched/bunch grasses be avoided by a minimum of 50 feet to avoid take and potentially significant impacts. If ground-disturbing activities will occur during the overwintering period (October through February), consultation with CDFW is warranted to discuss how to implement Project activities and avoid take. ***Any detection of CBB prior to or during Project implementation warrants consultation with CDFW to discuss how to avoid take***.

Recommended Mitigation Measure 7: CBB Take Authorization

If take cannot be avoided, CDFW recommends acquiring an ITP pursuant to Fish and Game Code Section 2081(b), prior to initiating ground-disturbing activities.

1-Q cont.

Special-status Plants

MM 4.4-4 is provided to mitigate for potential significant impacts to special-status plants and requires preconstruction surveys during the appropriate bloom period and implementation of a 50-foot no-disturbance buffer. CDFW concurs with these portions of MM 4.4-4. MM 4.4-4 also states that, "Pursuant to Section 1913(c) of the California Fish and Game Code, if project activities cannot avoid direct impacts to special-status plants, CDFW shall be notified and provided the opportunity to salvage any of these plants that would be affected. The CDFW may enter into agreement with the project proponent to retain a qualified entity for the relocation of sensitive plants to an approved location. Any salvage would be undertaken in accordance with a salvage plan to be developed in consultation with CDFW. The plan would include methods for transplanting and watering (if appropriate), success criteria for salvaged plants, monitoring the health and survivorship of salvaged plants during at least 5 years following salvage, and contingency measures if plant survivorship requirements are not satisfied." CDFW does not concur that this portion of MM 4.4.-4 is sufficient to mitigate for potential significant impacts and would like to note that Fish and Game Code Section 1913 is specifically applicable to certain types of projects (e.g., agricultural operations) and rare and endangered plant species listed under the Native Plant Protection Act. As the special-status plant species identified within the Project Sites are not identified in the NPPA, and it is likely that Project activities would not be applicable under Fish and Game Code Section 1913, CDFW recommends MM 4.4-4 be modified to include the following:

1-R

Recommended Mitigation Measure 8: Special-status Plant Avoidance Buffers

If special-status plants are detected, CDFW recommends special-status plant species be avoided whenever possible by delineating and observing a no disturbance buffer of at least 50 feet from the outer edge of the plant population(s) or

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specific habitat type(s) required by special-status plant species. If buffers cannot be maintained, then consultation with CDFW is warranted to determine appropriate minimization and mitigation measures for impacts to special-status plant species.

Recommended Mitigation Measure 9: Special-Status Plant Consultation and Take Authorization

If State endangered, threatened, or rare plants are identified during special status plant surveys, consultation with CDFW is recommended. If take cannot be avoided, then to ensure compliance with CESA and the Native Plant Protection Act (NPPA), CDFW recommends consultation with CDFW for acquisition of an ITP, pursuant to Fish and Game Code section 2081, subdivision (b) and/or California Code of Regulations, Title 14, section 786.9, subdivision (b).

1-R cont.

Editorial Comments and/or Suggestions

Lake and Streambed Alteration: Currently MM 4.4-23 and 4.4-24 are provided to mitigate for potential significant impacts to streams and include consultation with CDFW concerning potential impacts to jurisdictional features. CDFW concurs with these measures and recommends they be included within the FEIR.

Project activities that substantially change the bed, bank, and channel of any river, stream, or lake are subject to CDFW's regulatory authority pursuant Fish and Game Code section 1600 et seq. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake (including the removal of riparian vegetation): (c) deposit debris, waste or other materials that could pass into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent as well as those that are perennial and may include those that are highly modified such as canals and retention basins.

1-S

CDFW Ecological Reserve: Several of the Project parcels surround the Buttonwillow Ecological Reserve, which provides habitat for federal, and State listed species as well as many special status species.

In addition to consultation with CDFW's Regional Renewable Energy staff, CDFW recommends consultation with CDFW's Regional Ecological Reserve Management Unit staff well in advance of Project initiation to demonstrate accurate delineation of property boundaries to prevent inadvertent encroachment on CDFW-owned lands. Consultation is also recommended to discuss planned ingress and egress to the Project for the purposes of avoiding impacts on CDFW-owned lands, which is prohibited by Title 14 California Code of Regulations § 630. Please contact Reagan O'Leary, Regional

1-T

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Ecological Reserve Management Unit Supervisor, at the address on the letterhead above or via email at Reagan.OLeary@wildlife.ca.gov.

1-T cont.

Battery Energy Storage System Evaluation: CDFW is familiar with the Moss Landing battery plant fire, which was a battery energy storage system (BESS) which had densely stacked batteries within a single warehouse building and which used lithium-ion batteries with Nickel Manganese Cobalt (NMC) chemistry, which are more prone to overheating and thermal runaway. Fires at NMC BESSs cannot be extinguished with water and thus an alternative onsite fire suppression system is critical.

As such, the BESS systems proposed as part of the Project warrant a careful evaluation for potential fire-related impacts to biological resources within and surrounding the Project. While newer BESS technologies have been made more readily available since construction of the Moss Landing BESS, current battery technologies can still have the potential for impacts to biological resources if overheating and thermal runaway were to occur. For example, Lithium-ion BESS fires can release an array of toxic chemicals into the air (Mylenbusch et al. 2023). In addition to potential human health concerns, these emissions may also impact air quality for nearby wildlife, and harmful particulate matter may settle into soils or waterways, possibly affecting soil-dwelling organisms, burrowing mammals, and aquatic life.

1-U

The proposed Project includes installation of an approximately 2 GW BESS on the Project. Based on information in the DEIR, it appears the BESS configuration for the Project is likely to be constructed of self-contained energy storage modules (i.e., individual battery containers), which lessen the risk of widespread fire, although the DEIR does note that BESS equipment may still be housed in dedicated buildings (i.e., warehouses). The DEIR also notes that battery technology would be comprised of lithium-ion or non-lithium ion technologies. As such, CDFW strongly recommends that BESS configuration utilize the self-contained energy storage module design. In addition, CDFW recommends considering alternative battery technologies to the NMC chemistry, such as Lithium Iron Phosphate (LFP) which uses more benign constituents, is more stable over long life cycles, and has better thermal stability and is less prone to overheating (Evro 2024).

Given the above, CDFW recommends a thorough analysis of the BESS component of the Project to evaluate the potential impacts of a large and small BESS fires on biological resources within and surrounding the Project. CDFW recommends the evaluation not only assess the risk to biological resources, but also detail the Project-specific measures that would be implemented to reduce the risk of fire, and to carefully consider BESS siting, battery/container spacing, battery chemistry, battery life and degradation, and the most appropriate fire protection/suppression system.

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CNDDB: Please note that the California Natural Diversity Database (CNDDB) is populated by records through voluntary submissions of species detections. As a result, species may be present in locations not depicted in the CNDDB but where there is suitable habitat features capable of supporting species. A lack of an occurrence record in the CNDDB does not mean a species is not present. To adequately assess any potential Project-related impacts to biological resources, surveys conducted by a qualified biologist during the appropriate survey period(s) using the appropriate protocol survey methodology are warranted to determine whether any special-status species are present at or near the Project.

1-V

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database, which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the CNDDB. The CNDDB field survey form can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

1-W

CONCLUSION

CDFW appreciates the opportunity to comment on the DEIR to assist Kern County in identifying and mitigating Project impacts on biological resources. Please see the enclosed Mitigation Monitoring and Reporting Program (MMRP) table (Attachment 1) which corresponds with the recommended mitigation measures in this comment letter.

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If you have any questions, please contact Ren Cotter, Environmental Scientist, at the address provided on this letterhead, by telephone at (559) 767-0956 or by electronic mail at Ren.Cotter@wildlife.ca.gov.

1-W cont.

Sincerely,

DocuSigned by:
Julie Vance
FA83F09FE08945A...

Julie A. Vance
Regional Manager

ATTACHMENT 1 (MMRP)

ec: **State Clearinghouse**
Land Use and Climate Innovation
State.Clearinghouse@lci.ca.gov

U.S. Fish and Wildlife Service
Justin_Sloan@fws.gov

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Attachment 1

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Attachment 1

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

PROJECT: Buttonbush Solar Project by 29SC 8me, LLC

SCH No.: 2024041028

RECOMMENDED MITIGATION MEASURE	STATUS/DATE/INITIALS
Before Disturbing Soil or Vegetation	
BUOW	
Recommended Mitigation Measure 1: BUOW Preconstruction Surveys	
Recommended Mitigation Measure 3: BUOW Take Authorization	
SWHA	
Recommended Mitigation Measure 4: SWHA Foraging Habitat Mitigation	
CBB	
Recommended Mitigation Measure 5: CBB Surveys	
Recommended Mitigation Measure 7: CBB Take Authorization	
Special-status Plants	
Recommended Mitigation Measure 9: Special-status Plants Consultation and Take Authorization	
During Construction	
CBB	
Recommended Mitigation Measure 2: BUOW Avoidance Buffers	
Recommended Mitigation Measure 6: CBB Avoidance Buffers	
Special-status Plants	
Recommended Mitigation Measure 9: Special-status Plant Avoidance Buffers	

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Comment 1

California Department of Fish and Wildlife

1-A

The comment provides introductory remarks. The comment states that the California Department of Fish and Wildlife (CDFW) is appreciative of the opportunity to provide comments on the proposed Project. The comment does not raise a substantive issue on the content of the Draft EIR. No changes to the Draft EIR are required per this comment. The comment has been noted for the record.

1-B

The comment includes a summary of selected resources for which CDFW is responsible as part of the CEQA process. This comment does not raise a substantive issue on the content of the Draft EIR. No changes to the Draft EIR are required per this comment. The comment has been noted for the record.

1-C

The comment includes a summary of CDFW as a trustee agency and responsible agency in the CEQA process. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. No changes to the Draft EIR are required per this comment. The comment has been noted for the record.

1-D

The comment provides a summary of the project description. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. No changes to the Draft EIR are required per this comment. The comment has been noted for the record.

1-E

The comment introduces CDFW's comments and recommendations on the Draft EIR, which include editorial comments or other suggestions. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. No changes to the Draft EIR are required per this comment. The comment has been noted for the record.

1-F

The comment describes the Draft EIR's discussion of Pacific Gas and Electric's (PG&E's) Best Management Practices (BMPs) and the County's standard mitigation measures in relation to potential impacts of PG&E's proposed Midway Substation improvements. The comment also recommends that the County's mitigation measures be incorporated into PG&E's proposed work on those improvements to reduce impacts to less than significant and avoid unauthorized take of special-status species.

The County acknowledges CDFW's recommendation. The California Public Utilities Commission (CPUC) has exclusive jurisdiction over the PG&E facilities identified in the project description, including PG&E's proposed upgrades to the Midway Substation, communication infrastructure, and transmission line to the Point of Change or Ownership. This Draft EIR addresses potential impacts of the proposed Project as a whole, which include PG&E's proposed Midway Substation upgrades throughout the impact analysis section of each Draft EIR chapter. The Draft EIR recommends standard mitigation measures to address construction impacts while also acknowledging that PG&E already incorporates standard BMPs into its construction practices that similarly mitigate the environmental impacts of PG&E's upgrades. The County

has concluded that the proposed Midway Substation upgrades are minor in nature and that implementation of PG&E's BMPs is appropriate to reduce project impacts on CPUC oversight portions of the proposed Project to less-than-significant levels.

1-G

The comment summarizes the description of the proposed Project's transmission line, and notes that it is described as being near areas of natural vegetation and the Buttonwillow Ecological Reserve. The comment explains that construction in Ecological Reserves, including the construction of a transmission line, is prohibited.

No portion of the proposed Project, including the proposed gen-tie line, would be constructed within the Ecological Reserve. Routing of gen-tie and collector lines outside the Project parcels would be on private lands or within County road rights-of-way on the opposite side of the road from the Ecological Reserve. As described in Section 3.6.2, *Energy Transport*, the "collector lines would be located generally within or adjacent to the Project site and may connect several parcels to a Project substation. Both collector lines and gen-tie alternatives would use up to a 200-foot-wide corridor." Later in the same section, it is described that "Kern County may accept Irrevocable Offers of Dedication, or grant a franchise, license, and/or encroachment agreement for portions of the gen-tie and collector lines, while other portions would be sited within private easements." All gen-tie routes outside of the Project parcels would be constructed via an easement, franchise, or other agreement with the landowner or right-of-way holder (e.g., Kern County or the California Department of Transportation). The added clarification is shown below, added to Section 3.6.2, *Energy Transport*, and underlined:

Chapter 3, *Project Description, Section* 3.6.2, *Energy Transport*, page 3-100

3.6.2 Energy Transport

Generation Transmission Line

Power would be transmitted from the proposed substation(s) to the PG&E Midway Substation via up to 500 kilovolts (kV), overhead and/or underground gen-tie line(s). The preferred and alternative gen-tie alignments are shown in **Figure 3-3:** *Project Aerial*.

Gen-tie alternatives would be sized at up to 500 kV and up to 15 miles in length. Gen-tie alternatives generally would originate from proposed development areas, cross I-5, and route to the southern area of the Project site and then south to the existing PG&E's Midway Substation. The collector lines would be located generally within or adjacent to the Project site and may connect several parcels to a Project substation. Both collector lines and gen-tie alternatives would use up to a 200-foot-wide corridor. <u>No construction or other Project activities would take place within an Ecological Reserve.</u> The collector lines from the proposed parcel cluster to the main proposed substation would likely be sized at a voltage ranging from 34.5 kV to 500 kV, with 34.5 kV and 230 kV being likely voltages. Final heights and structure types are subject to change pending final engineering. The proposed Project would require redundant telecommunication connections. The primary telecommunication line would consist of fiber-optic cable lines necessary to support the on-site telecommunication equipment. Lines would be located on the same structures used to support the gen-tie line and/or buried.

1-H

The comment describes which portions of the proposed Project are closest to the Buttonwillow Ecological Reserve, Lokern Ecological Reserve, and Semitropic Ecological Reserve. The comment notes that ecological reserves provide habitat for many protected species, and some were established to offset impacts resulting from other projects. The comment recommends designing the proposed Project to minimize indirect impacts to ecological reserves and to setback Project elements from ecological reserves. The comment also notes that direct impacts to ecological reserves are prohibited.

The Draft EIR evaluates indirect impacts of the proposed Project, including impacts that could result to biological resources on nearby lands in the Ecological Reserves. Regarding direct impacts, refer to the response to Comment 1-G, above.

No further analysis of the proposed Project's potential impacts on nearby ecological reserves is required to satisfy California Environmental Quality Act's (CEQA's) analysis and disclosure requirements.

1-I

The comment describes the existing conditions for wildlife movement and connectivity in the Project vicinity and emphasizes the importance of maintaining this connectivity. The comment states the proposed Project may impact connectivity and recommends that the proposed Project consider additional design measures to enhance and facilitate movement through the Project site, such as wildlife corridors and refinements to the site layout.

The Draft EIR evaluated whether the proposed Project could interfere substantially with the movement of any native resident or migratory fish or wildlife species, with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Impact 4.4-4). No known or identified wildlife corridors exist within the Project site, and the Project site has not been identified as a wildlife connectivity area as mapped by the California Essential Habitat Connectivity Project.

The Draft EIR determined that the proposed Project construction, fencing, and activities have the potential to interfere with local movement of wildlife on, and adjacent to, the Project site. Although fencing would be installed, access roads and gen-tie lines would not be fenced, and no major barriers would be created that would prevent or impede wildlife movement in the region. Because the area is open and wildlife can move throughout the region unimpeded, the proposed Project would not pose a physical barrier to large-scale wildlife movement, and no major wildlife passages would be permanently reduced or eliminated by the proposed Project.

Project fencing could significantly impact wildlife movement, however, and the Draft EIR requires implementation of Mitigation Measure MM 4.4-17, which provides fencing requirements to enable wildlife to move freely through the Project site, to reduce potentially significant impacts to less than significant. As noted in the comment, Mitigation Measure MM 4.4-17 requires that permanent fencing around the Project site include wildlife portals or be raised off the ground to ensure permeability to wildlife. In addition, the proposed Project would be required to implement Mitigation Measure MM 4.1-4, which requires the preservation of native vegetation within the Project boundary wherever possible, minimizing mowing, implementation of a County-approved Landscape Revegetation and Restoration Plan (LRRP), management of vegetation throughout the life of the proposed Project, and monitoring of revegetated areas. This measure will ensure that vegetation within the Project site is as wildlife friendly as is practicable. No further analysis of the proposed Project's potential impacts on wildlife connectivity is required to satisfy CEQA's analysis

and disclosure requirements. No changes to the Draft EIR are required per this comment. The comment has been noted for the record.

1-J

The comment states that species protected under the California Endangered Species Act (CESA) have been documented as occurring at the Project site. The comment explains that if and when CDFW issues an Incidental Take Permit (ITP) to authorize take of species protected by the CESA, compensatory mitigation is typically required to offset and fully mitigate the impacts of the authorized take. The comment recommends that, if the Project proponent obtains an ITP, the Project proponent should consider compensatory mitigation lands that prioritize species habitat, the location of other conserved lands, and that enhance wildlife connectivity. The comment also recommends considering permanent conservation of some Project parcels. An agency may defer identifying a mitigation site pending the results of further studies. (Preserve Wild Santee v. City of Santee (2012) 210 Cal.App.4th 260 (EIR need not identify exact location of off-site mitigation property)); California Native Plant Society v. City of Rancho Cordova (2009) 172 Cal.App.4th 603, 621 (mitigation measure requiring preservation and enhancement of replacement habitat did not have to identify a specific mitigation site to be legally adequate). This comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

1-K

The comment states that some of the proposed mitigation measures for the proposed Project may not be sufficient to reduce impacts to less than significant and avoid unauthorized take for some wildlife that is special status and/or protected under CESA, and for some plants assigned California Rare Plant Ranks (CRPR). Further details are provided in subsequent comments. The comment has been noted for the record, and revisions to the Draft EIR are not necessary. Specific responses for each of the identified species are provided in the responses to Comments 2-L through 2-R, below.

1-L

The comment states that Mitigation Measure MM 4.4-15 describes mitigation for giant kangaroo rat and Tipton kangaroo rat and recommends that the Project proponent consult with CDFW to determine whether it is feasible to avoid take of these species.

Mitigation Measure MM 4.4-15, as provided in the Draft EIR, requires the Project proponent to consult with CDFW if the species are determined to be present. The mitigation measure also requires the Project proponent to avoid impacting kangaroo rat burrows if feasible, to conduct surveys and trapping for giant kangaroo rat and Tipton kangaroo rat if burrow avoidance is not feasible, and to share the survey results with the CDFW and the U.S. Fish and Wildlife Service (USFWS). This comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

1-M

The comment states the blunt-nosed leopard lizard, San Joaquin kit fox, and San Joaquin antelope squirrel are all known to occur near and within the Project site. The comment states that Mitigation Measures MM 4.4-11, MM 4.4-15, and MM 4.4-16 mitigate impacts to these species, and concurs with the inclusion of these measures in the Final EIR. The comment recommends that the Project proponent consult with

CDFW to determine whether it is feasible to avoid take of these species, due to their occurrence near the Project site.

For blunt-nosed leopard lizard, Mitigation Measure MM 4.4-11 as provided in the Draft EIR requires the Project proponent to consult with CDFW if blunt-nosed leopard lizard is determined to be present. The measure also requires the Project proponent to confer with CDFW to obtain an ITP if take cannot be avoided. In addition, the measure requires the Project proponent to conduct surveys for blunt-nosed leopard lizard, share the survey results with the CDFW and USFWS, develop appropriate avoidance measures, and avoid impacts if feasible. For San Joaquin antelope squirrel, Mitigation Measure MM 4.4-15 as provided in the Draft EIR requires the Project proponent to consult with CDFW if the species is determined to be present. The measure also requires the Project proponent to conduct surveys and trapping for the San Joaquin antelope squirrel if burrow avoidance is not feasible, and to share the survey results with the CDFW and USFWS. For San Joaquin kit fox, Mitigation Measure MM 4.4-16 as provided in the Draft EIR requires the Project proponent to confer with CDFW/USFWS if the species is determined present and impacts cannot feasibly be avoided. The measure also requires the Project proponent to conduct surveys and establish avoidance buffers around San Joaquin kit fox dens.

This comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

1-N

The comment states that western burrowing owl is a candidate for listing under the CESA and describes the local habitat suitability and documentation of the species at the Project site as described in the Draft EIR. The comment concurs with the avoidance buffers in Mitigation Measures MM 4.4-13 and MM 4.4-16.

The comment states that the visual buffers and passive relocation are not sufficient to reduce impacts to western burrowing owl to less than significant and prevent unauthorized take. Mitigation Measure MM 4.4-13 has been revised to clarify passive relocation methods, which may require an ITP to implement. Further, Mitigation Measure MM 4.4-16 has been modified to remove elements related to western burrowing owl to avoid any duplication and inconsistency with Mitigation Measure MM 4.4-13. Further, if take cannot be avoided, the proposed Project would require an ITP. The revised measures with strikethrough and underline indicating deletions and additions are as follows:

Section 1.11, *Summary of Environmental Impacts and Mitigation Measures*, Table 1-7, page 1-65 and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-13, page 4.4-106 and 4.4-107.

MM 4.4-13: Burrowing Owl Burrow Setbacks. Occupied burrowing owl burrows shall not be disturbed during the species nesting season (February 1 through August 31). The following distances shall be maintained between all disturbance areas and <u>active</u> burrowing owl nesting sites <u>on site unless an ITP is obtained that allows for buffer reductions, or a qualified biologist determines a reduced buffer would be adequate to avoid disturbing the owls. If reduced buffers are established, a qualified biologist shall monitor owl behavior and shall increase buffer distance if the owls exhibit signs of disturbance or distress.</u>

Time of Year		
April 1–Aug 15	Aug 16–Oct 15	Oct 16–Mar 31
Project Impact Level		
Low		
656 feet (200 meters)	656 feet (200 meters)	164 feet (50 meters)
Medium		
1,640 feet (500 meters)	656 feet (200 meters)	328 feet (100 meters)
High		
1,640 feet (500 meters)	1,640 feet (500 meters)	1,640 feet (500 meters)

If active burrowing owl avoidance is infeasible, then the Project proponent shall consult with CDFW regarding potential for project activities to result in take of burrowing owl and shall comply with all avoidance, minimization, and compensatory mitigation requirements set forth in any Incidental Take Permit (ITP) issued for the project by CDFW authorizing take of the species.

Burrowing owls present in proposed disturbance areas or within 500 feet or as specified under an ITP (as identified during pre-construction surveys) outside of the breeding season (between September 1 and January 31) may be moved away from the disturbance area using passive relocation techniques approved by CDFW. Passive relocation techniques in the CDFW's Staff Report on Burrowing Owl Mitigation Guidelines (CDFG 2012) include installing one-way doors in burrow entrances for 48 hours, to ensure the owl(s) have left the burrow, daily monitoring during the passive relocation period, and collapsing existing burrows to prevent reoccupation. A minimum of one or more weeks will be required to relocate the owl(s) and allow for acclimatization to alternate off-site burrows. Prior to burrow exclusion or eviction, the project proponent shall prepare a burrowing owl ~~management~~ relocation plan ~~for CDFW's review and approval~~ which shall include, at a minimum:

- Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species before burrow scoping;
- Type of scope to be used and appropriate timing of scoping to avoid impacts;
- Occupancy factors to look for and what shall 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).
- How the burrow(s) shall 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 no owls reside inside the burrow);

- Removal of other potential owl burrow surrogates or refugia on site;
- Photographing the excavation and closure of the burrow to demonstrate success and sufficiency.

Destruction of burrows shall occur only pursuant to the relocation plan; ~~a CDFW-approved management plan for the species;~~ burrow excavation shall be conducted by hand whenever possible.

~~As an alternative to passive relocation, occupied burrows identified off-site within 500 feet of Project activities may be buffered with hay bales, fencing (for example, sheltering in place), or as directed by the qualified biologist (and CDFW if the species remains protected under CESA), to avoid disturbance of burrows.~~ The provisions of an ITP, if obtained, shall supersede the work restrictions in this measure.

Section 1.11, *Summary of Environmental Impacts and Mitigation Measures*, Table 1-7, page 1-66 and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-13, page 4.4-109 and 4.4-110.

MM 4.4-16: Within 14 days prior to the start of project ground-disturbing activities, a pre-construction ~~preactivity~~ survey with a 500-foot buffer where land access is permitted shall be conducted by a qualified biologist knowledgeable in the identification of these species and approved by CDFW. Surveys need not be conducted for all areas at one time; they may be phased so that surveys occur within 14 days of the portion of the project site that will be disturbed. If dens/burrows that could support any of these species are discovered during the pre-activity survey, the avoidance buffers outlined below shall be established. No work shall occur within these buffers unless the biologist approves and monitors the activity.

~~**Burrowing Owl (Active Burrows)**~~

~~Nonbreeding season (September 1–January 31): 160 feet~~

~~Breeding season (February 1–August 31): 250 feet~~

American Badger/San Joaquin Kit Fox

Potential or atypical den: 50 feet

Known den: 100 feet

Natal or pupping den: 500 feet, unless otherwise specified by CDFW and/or USFWS

In determining whether San Joaquin kit fox activity could occur within these buffers, the biological monitor would take into account the following:

- Noise level and duration. The noise level and duration of activities would be considered. Loud (e.g., greater than 80 decibels) and sustained (e.g., longer than one hour) activities would be disallowed within the buffer setbacks. Activities with shorter durations and/or lower noise levels may be considered with continual observation of the den by the monitor and work stoppage if the biologist detects evidence of disturbance.

- Level of disturbance typically experienced in the location of the den prior to construction. Some areas of the proposed Project (e.g., existing roads or agricultural areas) have been historically subject to human disturbance and dens near these areas are assumed to be accustomed to those previous levels of disturbance. If construction noise and duration are similar to disturbances that would have occurred in the area prior to construction (e.g., vehicular traffic on an existing road), those activities could continue with ongoing monitoring of the den by a biological monitor.

- If construction activities have begun within 100 feet of a potential or atypical den that was determined during pre-construction activities to be inactive when construction began and the den becomes active during construction (i.e., becomes a "known" den), those activities would be allowed to continue at the same intensity as occurred when the den became active. A biological monitor would maintain continual watch on the den while construction activities are conducted within the buffer described above.

- In no case would construction activities, regardless of noise and duration, occur closer than 50 feet from a known or potential/atypical den or 500 feet from a natal/pupping den unless approved by California Department of Fish and Wildlife or United States Fish and Wildlife Service. Evidence that the construction activities were causing negative changes in behavior patterns would cause the biologist to disallow those activities inside the buffer.

~~If burrowing owls are detected, a Burrowing Owl Management and Relocation Plan shall be prepared by a qualified biologist and reviewed by, and implemented in consultation with, CDFW. Unless otherwise approved by CDFW, disturbance to occupied burrows shall be avoided. Disturbance to suitably sized burrows (>11 cm wide) shall be avoided during the breeding season (February 1 through August 31) unless proven to be unoccupied. Buffers shall be established around occupied burrows in accordance with guidance provided in CDFG's Staff Report on Burrowing Owl Mitigation (CDFG 2012: or most recent guidance). No Project activities shall be allowed to encroach into established buffers without the notification to CDFW. The buffer shall remain in place until it is determined that occupied burrows have been vacated.~~

~~Outside of the nesting season (September 1 through January 31), passive owl relocation techniques as outlined in the Burrowing Owl Management and Relocation Plan shall be implemented with notification to CDFW.~~

As directed above, if the buffers cannot be implemented, the Project proponent will confer with CDFW/USFWS for guidance on appropriate take avoidance measures. If impacts to ~~burrowing owl or~~ San Joaquin kit fox cannot be feasibly avoided, the Project proponent will confer with CDFW/USFWS to determine if take authorization from CDFW/USFWS through the CESA and/or ESA ITP process or other agency-approved method is recommended. ~~If recommended, the ITP or other agency-approved permit shall provide suitable a~~Avoidance and minimization measures set forth in any ITP or other agency-approved permit issued for the project in addition to those set forth in this mitigation measure shall also be implemented. ~~to reduce potential impacts, and adequate mitigation.~~ Mitigation of occupied habitat at a ratio to be determined in consultation with the appropriate agencies may be through on- or off-site preservation with permanent protection and long-term funding, or through purchase of equivalent credits through a mitigation bank if available in addition to implementing all other measures and conditions of the permit.

1-O

The comment recommends new mitigation measures related to western burrowing owl.

The comment recommends Recommended Mitigation Measure 1: BUOW Preconstruction Surveys, to conduct a focused survey per the 2012 Staff Report in the survey season immediately prior to construction. Focused surveys for western burrowing owl have been conducted across the entire Project site. In 2024, a focused habitat assessment and burrow mapping effort corresponding to Phases I and II as outlined in the CDFG 2012 Staff Report were conducted by Dudek, as described in the Biological Resources Technical Report (BTR) (Appendix D.2 of the Draft EIR). In 2023, Stantec biologists repeated the burrow mapping (Phase II) and completed a burrowing owl survey with repeated visits (Phase III) per the 2012 Staff Report, resulting in the completion of a focused western burrowing owl survey of the entire Project site. Pre-construction surveys for wildlife and for nesting birds, including western burrowing owl, will be completed as required per Mitigation Measures MM 4.4-7 and MM 4.4-12; no specific methods for a pre-construction survey for western burrowing owl are outlined in the 2012 Staff Report. This comment has been noted for the record, and revisions to the Draft EIR are not necessary.

The comment recommends Recommended Mitigation Measure 2: BUOW Avoidance Buffer, which specifies that the no-disturbance buffers outlined in the 2012 Staff Report be implemented for both wintering and breeding western burrowing owl. The existing Mitigation Measure MM 4.4-13 requires the implementation of avoidance buffers that match those described in the CDFG 2012 Staff Report, which includes detailed specifications for avoidance buffers in both the wintering and breeding seasons. The CDFG 2012 Staff Report does not recommend buffers around inactive burrows. Inactive means that the burrow is not used by burrowing owls. Establishing avoidance buffers around inactive burrows does not reduce impacts to western burrowing owls because, by definition, the species is not present and is not at risk of being adversely affected. This comment has been noted for the record, and revisions to the Draft EIR are not necessary.

The comment recommended a new mitigation measure, Recommended Mitigation Measure 3: BUOW Take Authorization, which stipulates consultation with CDFW if western burrowing owl or its burrows are detected and cannot be avoided. As detailed above in the response to Comment 1-N, Mitigation Measure

MM 4.4-13 has been revised to clarify that if impacts to burrowing owls cannot be avoided, consultation with CDFW is required.

1-P

This comment pertains to compensatory mitigation for impacts to Swainson's hawk. The comment identifies that Swainson's hawks were observed at the Project site during surveys in 2024. The comment recommends that impacts be mitigated as recommended in CDFW guidelines established in 1994, which recommend acquisition and preservation of off-site compensatory lands for project impacts within 10 miles of a Swainson's hawk nest.

CDFW (formerly called the California Department of Fish and Game [CDFG]) published recommendations in the State Fish and Game Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California (CDFG 1994 Guidelines) describing how and when to preserve off-site lands to mitigate for land conversion from agriculture or urban uses. In all, the CDFG 1994 Guidelines recommend compensatory mitigation for impacts within 10 miles of a Swainson's hawk, for a total of 113,600 acres of conserved lands for impacts around each Swainson's hawk nest.

Under CEQA, mitigation is required whenever a project may result in a significant impact to the environment. Where feasible, the impacts should be mitigated such that remaining impacts are less than significant. The CDFG 1994 Guidelines are now over 30 years old and do not reflect more recent information about Swainson's hawks in the Central Valley, including data that were collected and analyzed at the request of CDFW. Per the CDFW Five-Year Status Review for Swainson's Hawk (*Buteo swainsoni*), prepared in 2016, four different studies documented average home ranges of 1,001 to 9,979 acres for nesting Swainson's hawks in the Central Valley (CDFW 2016). These home ranges are equivalent to circles with radii of 0.71 to 2.23 miles, as described in the Swainson's Hawk Home Range and Habitat Literature Review for the Buttonbush Solar and Storage Project in Appendix O.7 of the Final EIR. In addition, a recent study of four utility-scale solar energy facilities in the Central Valley found that Swainson's hawks foraged within the solar arrays and that solar arrays were favored over some types of agricultural use (Estep 2021). Specifically, Estep's analysis found that compared to their availability in the landscape, solar arrays, alfalfa, tilled, and wheat fields were all used more often than expected, and ruderal/developed, orchard, grassland, and idle/fallow habitats were used less often than expected. Thus, conversion of agricultural lands to solar energy facilities does not result in the complete loss of foraging habitat, and it is expected that Swainson's hawk will continue to use the Project area for foraging during Project operations.

Based on the information from these studies of home range size and use of solar energy facilities, all conducted since the 1994 Guidelines were prepared, the proposed Project may result in a minor reduction in Swainson's hawk foraging opportunities through conversion of agricultural lands that provide high-value foraging habitat in the vicinity of active nests to a solar facility where Swainson's hawk foraging would also be expected to occur. While not a significant impact for purposes of CEQA review, Mitigation Measures MM 4.4-26 and MM 4.4-27 have been incorporated to include compensatory mitigation for impacts to Swainson's hawk foraging habitat, in proportion to the species' habitat needs (i.e., home range size and habitat preferences). Specifically, conversion of foraging habitat within 1 mile of an active Swainson's hawk nest will be mitigated at a 0.5 to 1 ratio. A reduced ratio as compared to the CDFG 1994 Guidelines is appropriate for the conversion of agricultural lands within one mile of a nest due to newer information demonstrating that Swainson's hawk will continue to use the Project site for foraging.

Section 1.11, *Summary of Environmental Impacts and Mitigation Measures*; Table 1-7, page 1-55; and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-26, page 4.4-113.

MM 4.4-26: Prior to the issuance of building and grading permits for Site 6, the project proponent/operator shall mitigate for the loss of Swainson's Hawk foraging habitat for portions of the project site within one mile of an active nest at a 0.5:1 ratio for a total of 605 acres. Mitigation lands may be nested with other compensatory lands provided it meets the necessary biological requirements and as determined by the appropriate wildlife agency. Total compensatory lands may be updated based on any future protocol-level survey and in consultation with the appropriate wildlife agency.

Section 1.11, *Summary of Environmental Impacts and Mitigation Measures*; Table 1-7, page 1-55; and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-27, page 4.4-113.

MM 4.4-27: Prior to the issuance of building and grading permits for Site 8, the project proponent/operator shall mitigate for the loss of Swainson's Hawk foraging habitat for portions of the project site within one mile of an active nest at a 0.5:1 ratio for a total of 603 acres. Mitigation lands may be nested with other compensatory lands provided it meets the necessary biological requirements and as determined by the appropriate wildlife agency. Total compensatory lands may be updated based on any future protocol-level survey and in consultation with the appropriate wildlife agency.

1-Q

The comment focuses on Crotch's bumble bee. The comment recommends additional elements for addition to Mitigation Measure MM 4.4-8, including a focused survey for the species according to the methods published by CDFW in 2023, avoidance of specific habitat features by 50 feet, and consultation regarding an ITP if take cannot be avoided.

Mitigation Measure MM 4.4-8 in the Draft EIR includes many aspects of the comment recommendations, including a focused survey for Crotch's bumble bee, avoidance of nest resources, such as thatched or bunch grasses, and consultation regarding an ITP. In response to this comment, Mitigation Measure MM 4.4-8 will be revised as follows to include details more closely matching the comment recommendations:

Section, 1.11, *Summary of Environmental Impacts and Mitigation Measures*, Table 1-7, page 1-62 and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-8, page 4.4-101.

MM 4.4-8: A pre-construction survey for Crotch's bumble bee shall occur within the project areas where suitable habitat has been identified during the primary flight period for workers and males (March 1 through June 30) prior to the start of project activities. The survey shall ensure that no nests for Crotch's bumble bee are located within the project areas. Crotch's bumble bee is a habitat generalist, ground-nesting bee. Surveys and other relevant recommendations shall be in accordance with the Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023) or with the most recent protocol available at the time of the surveys.

If thatched/bunch grasses ~~nest resources~~ occupied by Crotch's bumble bee are detected within the project areas, no ground-disturbing activities shall occur within 50 ~~100~~ feet ~~of the occupied nest resources~~, or as determined by a qualified biologist through evaluation of topographic features or distribution of floral resources. The thatched/bunch grasses~~nest resources~~ shall be avoided for the duration of the Crotch's bumble bee nesting period (February 1 through October 31). Outside of the nesting season, it is assumed that no live individuals would be present within the nest, because the daughter queens (gynes) usually leave by September, and all other individuals (original queen, workers, males) die. The gynes are highly mobile and can independently disperse to outside the project footprint to the proposed open space or other suitable areas beyond that have suitable hibernaculum resources. Because construction will have occurred in the area outside the occupied nesting resources, no suitable habitat will be present in the impact area, and it is assumed that new queens will disperse to habitat outside the project areas. If Crotch's bumble bee nests have been detected and ground-disturbing activities will occur during the overwintering period (October through February), the Project proponent shall consult with CDFW to discuss how to implement Project activities and avoid take.

If take cannot be avoided, take authorization prior to any ground-disturbing activities is warranted if the species remains a candidate or becomes listed under CESA. Take authorization would occur through issuance of an ITP by CDFW, pursuant to Fish and Game Code section 2081(b).

1-R

The comment focuses on special-status plants. The comment states that Fish and Game Code 1913(c) is only applicable to certain kinds of projects, and to plants listed as threatened, endangered, or rare. The comment recommends additional details be added to Mitigation Measure MM 4.4-4 to ensure that mitigation for impacts to special-status plants is sufficient.

It is the intent of Mitigation Measure MM 4.4-4 to apply to all special-status plants as defined in the Draft EIR, which includes the following categories:

- Species that are designated as rare, threatened, or endangered by CDFW or USFWS and are protected under either CESA (California Fish and Game Code Section 2050 et seq.) or Endangered Species Act (ESA) (16 USC 1531 et seq.)
- Species that are candidate species being considered or proposed for listing under ESA or CESA
- Species with a CRPR of 1 and 2 in the Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2024b)

Mitigation Measure MM 4.4-4, as provided in the Draft EIR, includes a 50-foot avoidance buffer, which is consistent with Recommended Mitigation Measure 8: Special-status Plant Avoidance Buffers. Therefore, Mitigation Measure MM 4.4-4 has not been modified in response to this element of the comment. In accordance with state law, take authorization would be required if the proposed Project activities were to take any plants listed as endangered, threatened, or rare. Mitigation Measure MM 4.4-4 has been revised to

include this stipulation, as suggested by the comment in Recommended Mitigation Measure 9: Special-status Plant Consultation and Take Authorization.

Section, 1.11, *Summary of Environmental Impacts and Mitigation Measures*, Table 1-7, page 1-61and 1-62 and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-4, page 4.4-99 and 4.4-100.

MM 4.4-4: Prior to the start of ground-disturbance activities or decommissioning of the main Project site, a qualified biologist knowledgeable on the identification of rare plant species shall conduct a pre-construction plant survey of areas of proposed disturbance within the main Project site and a 100-foot buffer (where legally accessible) timed during the appropriate blooming period of the target species (all special-status plants with potential to occur at the project, ~~March to May for Kern mallow, and February to April for alkali sink goldfields~~) prior to start of construction activities in this area to determine if any special-status plant species are present. If special-status plants are not identified during the survey(s), no further action is required. If special-status plants are identified on-site, their locations shall be mapped and Ecologically Sensitive Area (ESA) fencing should be established at a 50-foot radius around these individuals to ensure that they are not destroyed during project construction activities. ~~Pursuant to Section 1913(c) of the California Fish and Game Code, if~~ If project activities cannot avoid direct impacts to special-status plants, CDFW shall be notified and provided the opportunity to salvage any of these plants that would be affected. CDFW may enter into agreement with the project proponent to retain a qualified entity for the relocation of sensitive plants to an approved location. Any salvage would be undertaken in accordance with a salvage plan to be developed in consultation with CDFW. The plan would include methods for transplanting and watering (if appropriate), success criteria for salvaged plants, monitoring the health and survivorship of salvaged plants during at least 5 years following salvage, and contingency measures if plant survivorship requirements are not satisfied.

If State endangered, threatened, or rare plants, or plants protected as candidate for State listing, are identified during special-status plant surveys, the Project proponent shall consult with CDFW. If take cannot be avoided, then the Project proponent must obtain an ITP from CDFW prior to implementing any Project activities that would cause take.

Prior to initiating ground-disturbing activities during the construction and decommissioning phases of the Project in areas mapped as occupied by Kern mallow, after seeds have set (usually by May 31) remove and stockpile the uppermost 3-6 inches of topsoil. The stockpiled soil shall not be exposed to moisture that could trigger the germination of seed prior to redistribution. The stockpiled material shall be spread in the affected area, the closest comparable area, or the closest suitable habitat outside the footprint of roads, buildings, and structures prior to the next blooming season. During the operational phase of the Project, vegetation and/or fuel management activities within Kern mallow

occupied habitat shall be undertaken subsequent to after seeds of Kern mallow have set (usually by May 31). The Project proponent shall mitigate for impacted occupied Kern mallow habitat. Compensatory mitigation land shall be provided at a ratio of 1:1 acre on-site or at a nearby location with comparable habitat value. Individual Kern mallow plants and/or seeds will be salvaged from the Project site and translocated to the compensatory mitigation lands if authorized by the appropriate wildlife agency. Final total compensation land acres will be based on final site plan design and confirmation through the required pre-construction biological surveys. Mitigation land may be nested with other lands established as compensatory mitigation for other resources, provided it meets the necessary biological requirements and as determined by appropriate wildlife agency. Prior to issuance of any building or grading permit, the Project proponent shall (i) complete acquisition of such compensatory mitigation lands or equivalent mitigation credits applicable to the portion of the project covered by said grading or building permit; or (ii) provide a bond, letter of credit or other form of financial assurance acceptable to the County in an equivalent amount and acquire such lands or credits within eighteen (18) months of issuance of said building or grading permit.

1-S

The comment concurs with Mitigation Measures MM 4.4-23 and 4.4-24 with respect to mitigation for potential significant impacts to streams and describes the Project requirements related to these resources. The comment defines the aquatic resources under CDFW jurisdiction per Fish and Game Code 1600 et seq. and requirements to notify CDFW.

As described in Section 4.4.3, *Regulatory Setting*, of the Draft EIR, Fish and Game Code Sections 1600–1616 apply to the proposed Project. A delineation of aquatic resources potentially subject to CDFW jurisdiction was conducted by the Project proponent and included as Appendix D.4 of the Draft EIR. These resources are described in Section 4.4.2, *Environmental Setting*, of the Draft EIR, and analysis of the proposed Project's potential impacts is provided in Section 4.4.4, *Impacts and Mitigation Measures*. As noted in the comment, Mitigation Measure MM 4.4-23 and MM 4.4-24 detail how the proposed Project's impacts will be mitigated to less than significant. This comment does not raise a substantive issue on the content of the Draft EIR, and revisions to the Draft EIR are not necessary.

1-T

The comment concerns CDFW Ecological Reserves near the Project site. The comment recommends coordination with the CDFW Regional Ecological Reserve Management Unit prior to proposed Project implementation to ensure that Ecological Reserves are not impacted and provides contact information.

This comment does not raise a substantive issue on the content of the Draft EIR; no revisions to the Draft EIR have been made. This comment is noted for the record.

1-U

The proposed Project battery energy storage system (BESS) facilities would be designed, constructed, and operated in accordance with applicable industry best practices and regulatory requirements, including National Fire Protection Association (NFPA) 855 (Standard for the Installation of Stationary Energy Storage Systems), Section 1207 of the California Fire Code, and certified to UL 9540. In the unlikely event of a fire or thermal runaway event, the facility is designed to manage and prevent propagation. The proposed Project would include a minimum 20-foot setback from on-site vegetation to BESS facilities. California Fire Code Section 1207.8.3 requires a 10-foot setback, which was originally established by the NFPA 855 Committee and was later reflected in the International Fire Code and California Fire Code as an acceptable distance between a battery fire and other combustible exposure, including vegetation.

A battery fire does not produce embers like a typical structure or wildland fire, thus minimizing the spread of a battery fire to adjacent exposures and biological resources. Further, fire and smoke from lithium-iron battery fires are similar to a car fire and do not pose a greater risk than other structures to biological resources. For example, following a recent battery fire in Escondido, California, San Diego County Hazmat conducted air monitoring over a four-hour period during the incident and found that "only normal products [of] combustion of a structure fire were detected and at levels considered by NIOSH and OSHA to be well below exposure thresholds" (San Diego County Hazmat 2024). Air monitoring conducted by a third-party contractor (Haley & Aldrich) was also initiated during the incident and continued for an additional 12 hours after the fire was fully extinguished. Haley & Aldrich found that "[a]t no time during the incident did the levels of oxygen deviate from 20.9 percent, which is considered normal atmospheric level. Any decrease in the percentage of oxygen would indicate that there was some unknown gas in the atmosphere that was not able to be detected by monitoring equipment. Fortunately, no such deviation was detected. The use of fluoride reactive test strips was negative at all locations" (San Diego County Hazmat 2024).

In the Escondido battery fire, water samples were also obtained from runoff created by fire suppression personnel. According to public documents, "[t]he analysis of the samples collected from the runoff water suggests that the water quality is within acceptable limits for most contaminants, especially when considering public health standards for drinking water." The findings also state that "the low levels of metals detected, combined with the absence of more toxic elements like lead and cadmium, suggest that the water poses minimal risk both to human health and the environment." As outlined in a recent report by the Fire & Risk Alliance, "While lithium-ion battery fires produce chemical byproducts, studies show that their solubility in water is low, limiting the potential for groundwater contamination if direct [water] suppression efforts are performed. Additionally, standard stormwater management practices help prevent runoff from reaching natural water sources in the event that the fire department determines that suppression efforts are required" (Fire and Risk Alliance 2025).

Furthermore, air quality monitoring and soil sample testing during and after the Vistra battery fire in Moss Landing showed that there was no risk to the public throughout the incident, including from hydrogen fluoride and particulate matter. Air monitoring was conducted by the U.S. EPA, Vistra, and CTEH, LLC (County of Monterey 2025). DTSC conducted soil sample testing for heavy metals. While initial surface screening of ash and debris detected elevated levels of metals, subsequent soil samples did not. Drinking water was also tested for metals and found the reported levels within the normal drinking water standards and consistent with each water system's historical data. It is also notable that the Moss Landing facility's design was unique, featuring rows of battery racks indoors and utilizing nickel-manganese-cobalt, rather than the more common lithium-ion phosphate (Fire and Risk Alliance, 2025).

For the same reasons described above, the County has concluded that, in the unlikely event of a BESS fire, impacts to biological resources would be less than significant.

1-V

The comment provides background information on data contained in, and contributed to, the California Natural Diversity Database (CNDDB). This comment does not raise a substantive issue on the content of the Draft EIR; no revisions to the Draft EIR have been made. This comment is noted for the record.

1-W

The comment explains that payment of filing fees is required when a Notice of Determination is filed for a project under CEQA and provides information on how to contact CDFW about this letter. This comment does not raise a substantive issue on the content of the Draft EIR; no revisions to the Draft EIR have been made. This comment is noted for the record. The County thanks the author for their comments and participation in the public review of the environmental document.

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2: CalGEM

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December 2, 2025

VIA ELECTRONIC MAIL

Jack Foster

fosterja@kerncounty.com

Assessor Parcel Number(s): Multiple
Project Location Address: Site 1: Wasco Way and Sullivan Road Site 2: Seventh Standard and Buttonwillow Drive Site 3: Seventh Standard and North Corn Camp Road Site 4: Rowlee Road and Burbank Street Site 5: Brandt Road and Sullivan Road Site 6: Seventh Standard and Magnolia Ave Site 8: Rowlee Road and Lerdo Hwy Lat.

PROJECT TITLE: Buttonbush Solar and Storage Project by 29SC 8me, LLC.

Public Resources Code (PRC) section 3208.1 establishes re-abandonment responsibility when previously plugged and abandoned oil, gas or geothermal wells will be impacted by planned property development or construction activities. Local permitting agencies, property owners, and/or developers should be aware of, and fully understand, that significant and potentially dangerous issues may be associated with development near previously abandoned oil, gas, and geothermal wells. 2-A

The California Geologic Energy Management Division (CalGEM) has received the above-referenced project dated November 19, 2025. To assist local permitting agencies, property owners, and developers in making safe and practical land use decisions regarding potential development near oil, gas, or geothermal wells, CalGEM provides a table in the attached enclosure of the wells within the parcel boundary or in its vicinity, based on CalGEM's Well Finder database (https://maps.conservation.ca.gov/doggr/wellfinder/).

CalGEM categorically advises against building over, or in any way impeding access to, oil, gas, or geothermal wells. Impeding access to a well could result in the need to remove any structure or obstacle that prevents or impedes access including, but not limited to, buildings, housing, fencing, landscaping, trees, pools, patios, sidewalks, roadways, and decking at the landowner's expense if there is a need to access a well. Maintaining sufficient access is considered the ability for a well servicing unit and associated necessary equipment (consisting of well servicing rig, pumping equipment, pipe trailer) to reach a well from a public street or access way, solely over the parcel on which the well is located. A well servicing unit, and any necessary equipment, should be able to pass unimpeded along and over the route, and should be able to access 2-B

the well without disturbing the integrity of surrounding infrastructure. Impermeable barriers such as asphalt, concrete, and plastic may trap hazardous gases and liquids underneath and could create a safety hazard if built over a well that later develops a leak.

2-B Cont.

CalGEM recommends that any well for which access is impeded or built over, against CalGEM's advice, should be evaluated by a qualified petroleum professional for compliance with the statutory objectives of isolating all hydrocarbon-bearing strata; protecting underground and surface waters; prevention of subsequent damage to life, health, property, and other resources; and prevention of loss of oil, gas, or reservoir energy. CalGEM recommends that wells that do not meet these standards are abandoned or re-abandoned prior to construction. The well information can be accessed through CalGEM's Well Finder database mentioned above. PRC section 3208, subdivision (a), provides the primary statutory authority for CalGEM to oversee adequate abandonment of wells. Additionally, CalGEM has developed the regulatory guidance for operators to be followed during well abandonment, which are listed within California Code of Regulation, title 14 (CCR) section 1723 and associated sub-sections (for onshore wells), and section 1745 and associated sub-sections (for offshore wells).

There is no guarantee that a well abandoned in compliance with current Division requirements as prescribed by law will not start leaking in the future. Due to the inability to predict all subsurface conditions or changes, it always remains a possibility that any well may start to leak oil, gas, and/or water after abandonment, no matter how thoroughly the well was plugged and abandoned. CalGEM acknowledges wells plugged and abandoned to the most current Division requirements as prescribed by law have a lower probability of leaking in the future, however there is no guarantee that such abandoned wells will not leak.

CalGEM advises that all wells identified on the development parcel prior to, or during, development activities be tested for liquid and gas leakage. Surveyed locations in Latitude and Longitude, NAD 83 decimal format, and leak testing results should be provided to CalGEM. CalGEM expects any wells found leaking to be reported to CalGEM immediately.

PRC section 3208.1 gives CalGEM the authority to order or permit the re-abandonment of any well where it has reason to question the integrity of the previous abandonment. Responsibility for re-abandonment costs may be affected by the choices made by the local permitting agency, property owner, and/or developer in considering the general advice set forth in this letter. The PRC continues to define the person or entity responsible for re-abandonment as:

2-C

1. The property owner - If the well was plugged and abandoned in conformance with Division requirements at the time of abandonment, and in its current condition does not pose an immediate danger to life, health, and property, but requires additional work solely because the owner of the property on which the well is located proposes construction on the property that would prevent or impede

access to the well for purposes of remedying a currently perceived future problem, then the owner of the property on which the well is located shall obtain all rights necessary to re-abandon the well and be responsible for the re-abandonment.

2-C Cont.

2. The person or entity causing construction over or near the well - If the well was plugged and abandoned in conformance with Division requirements at the time of plugging and abandonment, and the property owner, developer, or local agency permitting the construction failed either to obtain an opinion from the supervisor or district deputy as to whether the previously abandoned well is required to be re-abandoned, or to follow the advice of the supervisor or district deputy not to undertake construction that impedes access, then the person or entity causing the construction over or near the well shall obtain all rights necessary to re-abandon the well and be responsible for the re-abandonment.

3. The party or parties responsible for disturbing the integrity of the abandonment - If the well was plugged and abandoned in conformance with Division requirements at the time of plugging and abandonment, and after that time someone other than the operator or an affiliate of the operator disturbed the integrity of the abandonment in the course of developing the property, then the party or parties responsible for disturbing the integrity of the abandonment shall be responsible for the re-abandonment.

Should any wells require abandonment or re-abandonment, the responsible party must submit a Notice of Intention (NOI) to CalGEM through WellSTAR. The NOI form can be accessed in the 'Plugging and Abandonment' section of the following link: https://www.conservation.ca.gov/calgem/for_operators.

No well work may be performed on any oil, gas, or geothermal well without written approval from CalGEM. Well work requiring approval includes, but is not limited to, mitigating leaking gas or other fluids from abandoned wells, modifications to well casings, and/or any other re-abandonment work. CalGEM also regulates the top of a plugged and abandoned well's minimum and maximum depth below final grade. CCR section1723.5 states well casings shall be cut off at least 5 feet but no more than 10 feet below the surface of the ground. If any well needs to be lowered or raised (i.e. casing cut down or casing riser added) to meet this regulation, a permit from CalGEM is required before work can start.

CalGEM makes the following additional recommendations to the local permitting agency, property owner, and developer:

1. To ensure that present and future property owners are aware of (a) the existence of all wells located on the property, and (b) potentially significant issues associated with any improvements near oil or gas wells, CalGEM recommends that information regarding the below identified well(s), and any other pertinent information obtained after the issuance of this letter, be communicated to the appropriate county recorder for inclusion in the title information of the subject

2-D

real property.

2. CalGEM recommends that any soil containing hydrocarbons be disposed of in accordance with local, state, and federal laws. Please notify the appropriate authorities if soil containing significant amounts of hydrocarbons is discovered during development.

2-D Cont.

As indicated in PRC section 3106, CalGEM has statutory authority over the drilling, operation, maintenance, and abandonment of oil, gas, and geothermal wells, and attendant facilities, to prevent, as far as possible, damage to life, health, property, and natural resources; damage to underground oil, gas, and geothermal deposits; and damage to underground and surface waters suitable for irrigation or domestic purposes. In addition to CalGEM's authority to order work on wells pursuant to PRC sections 3208.1 and 3224, it has authority to issue civil and criminal penalties under PRC sections 3236, 3236.5, and 3359 for violations within CalGEM's jurisdictional authority. CalGEM does not regulate grading, excavations, or other land use issues.

2-E

Should you have any questions, or if any wells are encountered that were not part of this letter, contact CalGEM at (661) 322-4031 or via email at CalGEMCentralCSWR@conservation.ca.gov.

Sincerely,

Emilio Flores

Emilio Flores
Office Technician

Enclosure

Enclosure: The wells listed below are reported to be located within and nearby the parcel boundary and may have future access impeded.

APN No.	API No.	Well Name
Mutiple	No wells found	
T28S, R23E, Section 11	0403047802	Kephart 1-11
T28S, R23E, Section 27	0402936155	Wisnom 1
T28S, R23E, Section 27	0402936552	1
T29S, R24E, Section 8	0403043053	Bowerbank 1-8H
T29S, R24E, Section 8	0403043311	Bowerbank 2-8H
T29S, R24E, Section 8	0403043152	Bowerbank 3-8H
T29S, R24E, Section 8	0402919748	Bowerbank Unit II 8-B
T29S, R24E, Section 8	0402919752	HJB 1
T29S, R24E, Section 8	0402939165	Ferguson 1
T29S, R24E, Section 8	0402939175	Continental 1
T29S, R24E, Section 8	0402919751	Brandt 2
T29S, R24E, Section 8	0402919749	Bowerbank Unit-Three 8-C
T29S, R24E, Section 8	0403010342	Bowerbank 10
T29S, R24E, Section 8	0403022187	Bowerbank 20
T29S, R24E, Section 8	0403022419	Bowerbank 23
T29S, R24E, Section 8	0402919750	Brandt 1

2-F

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Comment 2

Cal Gem

2-A

The comment summarizes Public Resources Code (PRC) Section 3208.1, which establishes well abandonment responsibility when a previously plugged and abandoned well will be impacted by planned property development or construction activities. The comment also acknowledges receipt of the Notice of Availability of the Draft EIR, dated 11/19/2025, and has included a table at the end of the letter that lists wells within the parcel boundary or in its vicinity. This comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

2-B

The comment advises against building over or in any way impeding access to oil, gas, or geothermal wells. The comment states that equipment necessary for accessing wells should be able to pass unimpeded, and that access to the well should not disturb the integrity of the surrounding infrastructure. As such, the comment advises that all wells for which access is impeded or built over, against CalGEM's advice, should be tested by a qualified petroleum professional for determining compliance with statutory objectives including, but not limited to, protecting underground and surface waters, prevention of subsequent damage to life, health, and property, and other resources, and prevention of loss of oil, gas, or reservoir energy to assess for abandonment of wells. Additionally, the comment advises that all wells identified in areas to be developed be tested for liquid and gas leakage, and that surveys be provided to CalGEM, and that any wells found leaking be reported to CalGEM immediately. This comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

2-C

The comment states that CalGEM has authority to order or permit the re-abandonment of a well, where it has reason to question the integrity of any previous abandonment, pursuant to PRC Sections 3208.1. The comment provides further information on PRC Section 3208.1 regarding the person or entity responsible for re-abandonment. Furthermore, the comment states that without written approval from CalGEM, no work can be performed on any oil, gas, or geothermal well. This comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

2-D

The comment provides two recommendations for the proposed Project: 1) information regarding the wells be communicated to the appropriate county recorder for inclusion in the title information for the Project site, and 2) any soil containing hydrocarbons be disposed of in accordance with local, state, and federal laws. This comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

2-E

The comment provides a discussion of CalGEM's statutory authority, as indicated in PRC Sections 3106, 3208.1, 3224, 3236, 3236.5, and 3359. The Lead Agency acknowledges CalGEM's statutory authority. The comment clarifies that CalGEM does not regulate grading, excavations, or other land use issues. The comment provides contact information for any questions and for any wells that are encountered that were not part of the letter. This comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

2-F

The comment lists wells within the Project boundary that may have future access impeded by Project development. Per Mitigation Measure MM 4.9-3, the Project proponent is required to provide documentation demonstrating that all proposed construction above or near plugged or abandoned oil and gas wells has been avoided and meets current CalGEM standards. This comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary. The County thanks the author for their comments and participation in the public review of the document.

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7.2.2 Local Agencies

3: San Joaquin Valley Air Pollution Control District

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San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

December 29, 2025

Jack Foster
County of Kern
Planning and Natural Resources Department
2700 M Street, Suite 100
Bakersfield, CA 93301

Project: Draft Environmental Impact Report for Buttonbush Solar Storage

District CEQA Reference No: 20251347

Dear Mr. Foster:

The San Joaquin Valley Air Pollution Control District (District) has reviewed the Draft Environmental Impact Report (DEIR) from the County of Kern (County) for the proposed project. Per the DEIR, the project consists of the construction and operation of a 2,000-megawatt photovoltaic solar facility with a 16,000 megawatt-hour battery energy storage system (BESS) on approximately 11,983 acres. (Project). The Project is located on several separate sites within unincorporated Kern County, directly north of Buttonwillow, approximately four miles west of the City of Bakersfield, two miles west of the City of Shafter, and seven miles southwest of the City of Wasco. 3-A

The District offers the following comments at this time regarding the Project:

1) Construction Emissions

Although Section 4.3 (Air Quality) of the DEIR determined that the Project related impacts on air quality would be less than significant with mitigation, in Appendix C.2 (Air Quality, Greenhouse Gas Emissions, and Energy Technical Report) of the Draft EIR, the analysis does not appear to account for all areas of the Project site that would be disturbed during construction. For example, in addition to site preparation, building construction, and trenching activities, project-related construction activities would likely include, but are not limited to, grading, construction of paved or gravel access roads, and other associated ground-disturbing activities. The omission of these construction activities and disturbed areas may result in an underestimation of the Project's construction-related air quality emissions. Therefore, the District recommends that the construction emissions analysis be revised to fully account for all areas of construction-related disturbance and associated equipment activities. 3-B

Samir Sheikh
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: (661) 392-5500 FAX: (661) 392-5585

www.valleyair.org www.healthyairliving.com

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Additionally, the analysis for the Project incorporates construction mitigation measures, for example "Advanced Engine Tiers" and "Use Electric or Hybrid Powered Equipment." The analysis accounts for mitigation measure AQ-1 in Appendix C.2 which requires the use of Tier 4 equipment. However, the mitigation measure 4.3-5 for the use of Tier 4 equipment in the Draft EIR does not require them and only allows for the use of Tier 4 when available. The language of these two measures about Tier 4 equipment creates uncertainty on how they would be implemented and enforced, and potentially overestimating the estimated emission reductions that would be achieved. To ensure that construction-related air quality emission impacts are reduced, the District recommends clarifying the construction mitigation measures in the DEIR and identifying a clear enforcement mechanism describing how the County will ensure that the selected construction mitigation measures are implemented and monitored during Project construction.

3-B Cont.

2) Health Risk Screening/Assessment

The District reviewed the Health Risk Assessment (HRA) for the Project and has the following comments:

- The District was unable to confirm the conclusions presented in the environmental document because all of the supporting data, e.g., HARP2/AERMOD input and output files, were not provided for District review.

3-C

- The District considers the total project health impacts (cancer, chronic and acute) as the sum of scores from both construction and operational activities.

- No operational emissions were evaluated for health impacts. The project proponent identifies emergency backup generators as part of the operational emissions (see page 4.3-81 of the DEIR). These sources could likely require District permits and, because of this, may need to be included in the HRA as part of the operational impacts.

- In Impact 4.3-2 (Page 4.3-69 of the DEIR, under Construction and Decommissioning), it is indicated that:

  "As discussed in Section 4.3.4, Methodology, Construction Emissions, criteria air pollutant emissions associated with temporary construction activity were quantified using CalEEMod. Construction emissions were calculated for the estimated worst-case day over the construction period associated with each phase and reported as the annual emissions estimated during construction."

After review of the CalEEMod outputs found in Appendix C.2 of the DEIR, the District could not confirm the emissions values presented in Tables 4.3-8 and 4.3-9. Please provide all necessary assumptions, documents, and calculations in order for the District to be able to confirm the emissions presented accurately reflect the proposed project.

- In Impact 4.3-3 (Page 4.3-83 of the DEIR), it is indicated that:

  "Air Dispersion modeling of DPM from construction equipment was conducted using emissions estimated using CalEEMod and a spreadsheet-based model, assuming emissions would occur 8 hours per day, 5 days per week."

  Please provide all necessary assumptions, documents, and calculations in order for the District to be able to confirm the emissions presented accurately reflect the proposed project.

- Please provide justification for the parameters used in modeling the construction activity. This includes the dimensions of the line volume sources and the emission rates, as it does not appear that normalized emission rates were used. The District recommends modeling construction activity as an elevated area source the size of the expected construction area with a release height set to approximately the average release height of the expected construction equipment (usually about 12-15 ft, when excluding an initial vertical dimension).

3-C Cont.

Modifications to the HRA based on the comments listed above have the potential to cause the Project to exceed District health risk thresholds. Therefore, the District recommends revising the HRA to ensure the analysis accurately reflects the Project's potential air quality impacts.

3) Ambient Air Quality Analysis

The District reviewed the Ambient Air Quality Analysis (AAQA) for the Project and has the following comment:

3-D

The AAQA modeling does not appear to use receptor gridding that sufficiently represents the 'ambient' air surrounding the proposed project. It appears that receptors were only placed on identifiable residents. Regarding ambient air, receptors should be also placed where the general public has reasonable access.

Modifications to the AAQA based on the comment above have the potential to cause the Project to cause or contribute to an exceedance of any ambient air quality standard. Therefore, the District recommends revising the AAQA to ensure the analysis accurately reflects the Project's potential air quality impacts.

4) Voluntary Emission Reduction Agreement

Per Mitigation Measure 4.3-4 of the DEIR, the Owner/Operator is required to fully mitigate construction and operational emissions of nitrogen oxides (NOx), reactive organic gases (ROG), particulate matter less than 10 microns (PM10), and particulate matter less than 2.5 microns (PM2.5) in order to avoid any net increase in these pollutants through a Voluntary Emission Reduction Agreement (VERA) with the District. However, Mitigation Measure AQ-1 in Appendix C.2 (Air Quality, Greenhouse Gas Emissions, and Energy Technical Report) of the DEIR does not require the same level of emission reductions through the VERA. 3-E

The District recommends that Mitigation Measure AQ-1 in Appendix C.2 be revised to be consistent with Mitigation Measure 4.3-4 in the Draft EIR to ensure that construction and operational emissions are fully mitigated. Furthermore, the DEIR may need clarification regarding the Project's construction and operational related emissions and emission reductions to be mitigated under a VERA should any revisions be made to the air quality related analysis per Comment 1 of this letter.

5) Truck Routing

Truck routing involves the assessment of which roads Heavy Heavy-Duty (HHD) trucks take to and from their destination, and the emissions impact that the HHD trucks may have on residential communities and sensitive receptors. The Project is expected to result in HHD truck trips from construction activities, as such, the District recommends the County evaluate HHD truck routing patterns for the Project, with the aim of limiting exposure of residential communities and sensitive receptors to emissions. This evaluation would consider the current truck routes, the quantity and type of each truck (e.g., Medium Heavy-Duty, HHD, etc.), the destination and origin of each trip, traffic volume correlation with the time of day or the day of the week, overall Vehicle Miles Traveled (VMT), and associated exhaust emissions. The truck routing evaluation would also identify alternative truck routes and their impacts on VMT and air quality. 3-F

6) District Rules and Regulations

The District issues permits for many types of air pollution sources, and regulates some activities that do not require permits. A project subject to District rules and regulations would reduce its impacts on air quality through compliance with the District's regulatory framework. In general, a regulation is a collection of individual rules, each of which deals with a specific topic. As an example, Regulation II (Permits) includes District Rule 2010 (Permits Required), Rule 2201 (New and Modified Stationary Source Review), Rule 2520 (Federally Mandated Operating Permits), and several other rules pertaining to District permitting requirements and processes. 3-G

The list of rules below is neither exhaustive nor exclusive. Current District rules can be found online at: https://ww2.valleyair.org/rules-and-planning/current-district-rules-and-regulations. To identify other District rules or regulations that apply to future projects, or to obtain information about District permit requirements, the project proponents are strongly encouraged to contact the District's Small Business Assistance (SBA) Office at (661) 392-5665. 3-G Cont.

6a) District Rule 9510 - Indirect Source Review (ISR)

The Project is subject to District Rule 9510 because it will receive a project-level discretionary approval from a public agency and will equal or exceed 9,000 square-feet of other development space.

3-H

The purpose of District Rule 9510 is to reduce the growth in both NOx and PM emissions associated with development and transportation projects from mobile and area sources; specifically, the emissions associated with the construction and subsequent operation of development projects. The ISR Rule requires developers to mitigate their NOx and PM emissions by incorporating clean air design elements into their projects. Should the proposed development project clean air design elements be insufficient to meet the required emission reductions, developers must pay a fee that ultimately funds incentive projects to achieve off-site emissions reductions.

Per Section 5.0 of the ISR Rule, an Air Impact Assessment (AIA) application is required to be submitted no later than applying for project-level approval from a public agency. As of the date of this letter, the District has not received an AIA application for this Project. Please inform the project proponent to immediately submit an AIA application to the District to comply with District Rule 9510 so that proper mitigation and clean air design under ISR can be incorporated into the Project's design. One AIA application should be submitted for the entire Project.

Information about how to comply with District Rule 9510 can be found online at: https://ww2.valleyair.org/permitting/indirect-source-review-rule-overview

The AIA application form can be found online at: https://ww2.valleyair.org/permitting/indirect-source-review-rule-overview/forms-and-applications/

District staff is available to provide assistance, and can be reached by phone at (559) 230-5900 or by email at ISR@valleyair.org.

6b) District Rule 4601 (Architectural Coatings)

The Project may be subject to District Rule 4601 since it may utilize architectural coatings. Architectural coatings are paints, varnishes, sealers, or stains that are applied to structures, portable buildings, pavements or curbs. The purpose of this rule is to limit VOC emissions from architectural coatings. In addition, this rule specifies architectural coatings storage, cleanup and labeling requirements. Additional information on how to comply with District Rule 4601 requirements can be found online at: https://ww2.valleyair.org/media/tkgjeusd/rule-4601.pdf

3-I

6c) District Regulation VIII (Fugitive PM10 Prohibitions)

The project proponent may be required to submit a Construction Notification Form or submit and receive approval of a Dust Control Plan prior to commencing any earthmoving activities as described in Regulation VIII, specifically Rule 8021 – *Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities.*

3-J

Should the project result in at least 1-acre in size, the project proponent shall provide written notification to the District at least 48 hours prior to the project proponents intent to commence any earthmoving activities pursuant to District Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities). Also, should the project result in the disturbance of 5-acres or more, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials, the project proponent shall submit to the District a Dust Control Plan pursuant to District Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities). For additional information regarding the written notification or Dust Control Plan requirements, please contact District Compliance staff at (559) 230-5950.

The application for both the Construction Notification and Dust Control Plan can be found online at: https://ww2.valleyair.org/media/fm3jrbsq/dcp-form.docx

Information about District Regulation VIII can be found online at: https://ww2.valleyair.org/dustcontrol

6d) Other District Rules and Regulations

3-K

The Project may also be subject to the following District rules: Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations).

7) District Comment Letter

The District recommends that a copy of the District's comments be provided to the Project proponent.

3-L

If you have any questions or require further information, please contact Jacob Torrez by e-mail at Jacob.torrez@valleyair.org or by phone at (559) 230-6558.

Sincerely,

Mark Montelongo
Director of Policy and Government Affairs



Daniel Martinez
Program Manager

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Comment 3

San Joaquin Valley Air Pollution Control District

3-A

This comment provides introductory remarks and summarizes the proposed Project. The comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

3-B

The comment expresses concern that the air quality analysis does not account for all aspects of construction, including grading, construction of vehicle access roads, and other ground-disturbing activities. The comment notes this omission could result in an underestimation of the proposed Project's construction-related air quality emissions.

The County acknowledges the San Joaquin Valley Air Pollution Control District (SJVAPCD's) concern. While the air quality modeling did not include these activities as discrete construction phases, off-road equipment and truck trip activity associated with these construction activities were included in the modeling, and the analysis includes these activities. For example, for both grading and access road construction, the type of off-road equipment that would be used is found within the Site Preparation phase of construction in the Draft EIR, such as graders, rubber-tired loaders, and crawler tractors. Similarly, there are adequate worker, vendor, and haul truck trips within the Site Preparation phase to account for grading and road construction activities. As such, there is no need to remodel to account for these types of activities.

The County understands the SJVAPCD's concern with the difference between proposed Mitigation Measure AQ-1 in Appendix C.2 and Mitigation Measure MM 4.3-5 of the Draft EIR. Mitigation Measure MM 4.3-5 of the Draft EIR will be included in the Mitigation Monitoring and Reporting Program (MMRP) and will be enforceable by the County once the County Board of Supervisors adopts the notice of decision for the proposed Project. Mitigation Measure MM AQ-1 of Appendix C.2 is a recommended measure in a supporting technical report for the Draft EIR and it is not the final mitigation measure included within the MMRP that will be enforceable for the proposed Project. Further, Mitigation Measure MM 4.3-4 of the Draft EIR requires the Project to fully mitigate construction and operational emissions, meaning no net increase in emissions. Therefore, the modification of Mitigation Measure MM 4.3-5 is not necessary.

3-C

The comment requests modifications to the Health Risk Assessment prepared for the proposed Project. The comment also requests the assumptions, documents, and calculations used for the air quality model to confirm the emissions and analysis in the Draft EIR.

The County understands the District was unable to review and verify the modeling inputs for AERMOD and HARP for the Health Risk Assessment performed. An Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum is provided in Appendix N of this Final EIR. The County will provide the revised modeling files analyzed in the Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum Attachment B to the SJVAPCD for review.

As described on page 3-108 of the Draft EIR, up to 10 emergency backup generators could be implemented and utilized during operation of the proposed Project. These backup generators would be installed for

redundant permanent power for the operations and maintenance (O&M) buildings, on-site substations, and/or BESS facilities. The generators would only be used in an emergency situation.

The County acknowledges that the emergency generators, while disclosed and discussed in the Draft EIR, were not accounted for in the Draft EIR air quality technical report emissions. To ensure emissions from these potential backup generators are accounted for, the air quality assessment (Attachment A) was updated as described in the Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum to include the generators. For the purposes of modeling, it was assumed that each generator would be operated up to a maximum of 200 hours per year. As shown in the revised air quality assessment on pages 4 and 5 of the Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum and Attachment B to it, the health risk, including the operational generators, would still be below SJVAPCD thresholds, and impacts would remain less than significant. As such, Tables 2, 3, 4, 5, 6, and 7 of the Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum updates the data in Draft EIR Tables 4.3-16, 4.3-17, 4.3-18, 4.3-19, 4.8-5, 4.6-4 respectively, in the Draft EIR Sections 4.3, 4.6, and 4.8 to reflect this potential, although unlikely, worst-case scenario.

The County acknowledges SJVAPCD's recommendation to remodel portions of the Health Risk Assessment using an area source. However, the volume sources used were based on guidance from the South Coast Air Quality Management District and Santa Barbara County Air Pollution Control District (SCAQMD 2008; SBCAPCD 2025). The SJVAPCD does not have adopted guidance for preparing a health risk assessment for off-road equipment or construction. Therefore, the use of volume sources is adequate for this purpose. As project impacts would not exceed the thresholds with the inclusion of the potential backup emergency-only generators, no new or substantially altered mitigation is required to be incorporated into the Final EIR.

3-D

The comment requests modifications to the Ambient Air Quality Analysis (AAQA) prepared for the proposed Project to ensure that the ambient air quality conditions are accurately represented.

The County acknowledges SJVAPCD's concern for receptor gridding that sufficiently represents the "ambient" air surrounding the proposed Project. The AAQA was prepared in accordance with the SJVAPCD APR 1925 Policy for District Rule 2201 AAQA Modeling with receptor spacing from section V.A., as follows:

- 25-meter spacing on the facility boundary
- 25-meter spacing from the facility boundary to 100 meters
- 50-meter spacing from 100 meters to 250 meters
- 100-meter spacing from 250 meters to 500 meters
- 250-meter spacing from 500 meters to 1,000 meters
- 500-meter spacing from 1,000 meters to 2,000 meters

This resulted in the modeling of 204,058 receptors (as shown on page 1,060 of Appendix C.2 of the Draft EIR). This can be verified by accessing the summary file labeled "BB AAQA_2007-2011_ALL_1.SUM" and the GRF output file labeled "AAQA_2007-2011_ALL_1.GRF." Therefore, the AAQA modeling is

consistent with SJVAPCD guidelines. No changes or modifications have been made to the Draft EIR in response to this comment.

3-E

This comment identifies differences between the level of emission reductions required through a Voluntary Emission Reduction Agreement (VERA) with the SJVAPCD in Mitigation Measure MM 4.3-4 of the Draft EIR compared to Mitigation Measure AQ-1 in Appendix C.2 and recommends that Mitigation Measure AQ-1 in Appendix C.2 be revised to be consistent with Mitigation Measure MM 4.3-4 in the Draft EIR to ensure that construction and operational emissions are fully mitigated. The comment further states that the Draft EIR may need clarification regarding the proposed Project's construction- and operational-related emissions and emission reductions to be mitigated under a VERA should any revisions be made to the air-quality related analysis per Comment 1 of this letter.

The County understands SJVAPCD's concern with the difference between proposed Mitigation Measure AQ-1 in Appendix C.2 and Mitigation Measure MM 4.3-4 of the Draft EIR. Mitigation Measure MM 4.3-4 of the Draft EIR will be included in the MMRP and will be enforceable by the County once the County Board of Supervisors adopts the notice of decision for the proposed Project. Mitigation Measure AQ-1 of Appendix C.2 is a recommended measure in a supporting technical report for the Draft EIR, and it is not the final mitigation measure included within the MMRP that will be enforceable for the proposed Project. No changes or modifications have been made to the Draft EIR in response to this comment.

3-F

The County understands SJVAPCD's concern with the potential for heavy-duty trucks traveling near sensitive receptors during construction of the proposed Project. The proposed Project is spread out over 11,983 acres total, with seven distinct Project sites (Sites 1-6 and Site 8) that are noncontiguous. The proposed Project is also located in a rural area consisting mainly of farming parcels. As described in Section 4.15, *Transportation*, County-maintained roads that are expected to provide access to the Project site, and also serve as links to regional roadways, include Lerdo Highway, and 7th Standard Road as an east-to-west connector. Rowlee Road runs north to south and intersects Interstate 5 (I-5), West Lerdo Highway, 7th Standard Road, and State Route 58 (SR-58). These roadways all operate with two lanes within the vicinity of the Project site.

Truck Routes

Regional access to the Project site is provided by I-5, Highway 58, and Highway 46. Construction and operation traffic would access the Project site from the following local roads: Wasco Way (Site 1), Merced Avenue (Site 8), Lerdo Highway (Site 8), Rowlee Road (Site 8), Wildwood Road (Site 8), Buttonwillow Drive (Site 4), 7th Standard Road (Site 2, Site 3, Site 5, and Site 6), Snow Road (Site 1, Site 2, and Site 5), and/or Sullivan Road (Site 1).

As noted on the site plan, each site will have multiple access points as follows:

Site 1

- Multiple access points on Buttonwillow Drive
- Multiple access points on Sullivan Road
- Multiple access points on Wasco Way

- Access point off SR-58

Site 2

- Multiple access points on 7th Standard Road

Site 3

- Access from internal roads that originate from Site 2 access points along 7th Standard Road

Site 4

- Multiple access points on Rowlee Road

Site 5

- Multiple access points on 7th Standard Road
- Multiple access points on Brandt Road
- Access point on Cannon Street

Site 6

- Multiple access points on Burbank Street
- Multiple access points on Riverside Street
- Multiple access points on Magnolia Avenue
- Access point on Wasco Avenue
- Multiple access points on 7th Standard Road

Site 8

- Multiple access points on Rowlee Road
- Multiple access points on Merced Avenue
- Multiple access points on West Lerdo Highway

Due to the discontinuous nature of the Project sites, implementation of Mitigation Measure MM 4.15-2 requires the proposed Project to submit a Construction Traffic Control Plan to the Kern County Public Works Department and Caltrans for review and approval prior to the issuance of construction or building permits. The Traffic Control Plan will be designed to maintain the efficient flow of Project-related traffic.

As noted in the Draft EIR Chapter 3, *Project Description*, the Project site is located in a rural area of unincorporated Kern County. Existing uses surrounding the Project site consist largely of agriculturally zoned parcels with farm and/or rural residential uses. Sensitive receptors have been identified in **Figure 4.3-1:** *Sensitive and Worker Receptors*, of the Draft EIR. The nearest receptor is a residential home and outbuildings on APN 087-040-06, west of Rowlee Road and north of Lerdo Highway. Another residential home and outbuildings are located on APNs 103-010-42 and 103-010-43, east of Brandt Road and south of 7th Standard Road. A residential home and agriculture-related outbuildings are on APN 103-060-04, just east of Brandt Road and north of Flores Road. The owners of the abovementioned residential homes are all participating in the proposed Project.

These existing sensitive receptors represent the nearest land uses with the potential to be impacted by construction and operation of the proposed Project. The Draft EIR concluded the proposed Project's construction toxic air contaminant health-risk impacts, including those associated with the Midway Substation upgrades, would be less than significant and further reduced with implementation of Mitigation Measures MM 4.3-4 and MM 4.3-5. As noted above, each Project site has multiple access points for construction and deliveries. Mitigation Measure MM 4.15-2 requires a Construction Traffic Control Plan designed to maintain the efficient flow of Project-related traffic.

Furthermore, the proposed Project is required to fully mitigate construction emissions to zero in accordance with Mitigation Measure MM 4.3-4. The emissions from trucks would be temporary and would not occur during operation of the proposed Project. Finally, the revised Health Risk Assessment (Appendix N) for the proposed Project showed that diesel particulate matter emitted during construction and operation of the proposed Project would result in a less-than-significant impact. No changes or modifications have been made to the Draft EIR in response to this comment.

3-G

The comment states that rules and regulations work to reduce a project's impact on air quality through compliance with SJVAPCD's regulatory framework. The comment provides a list of rules pertaining to SJVAPCD permitting requirements and processes, and notes that the list is neither exhaustive nor exclusive. The comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

3-H

The comment states that the proposed Project is subject to SJVAPCD Rule 9510 – Indirect Source Review (ISR) because it will receive a project-level discretionary approval from a public agency and will equal or exceed 9,000 square feet of other development space. This comment provides a summary of the requirements of SJVAPCD Rule 9510. The comment states that the ISR Rule requires developers to mitigate their nitric oxide (NO_X) and particulate matter (PM) emissions by incorporating clean air design elements into their projects. Should a proposed development project's clean air design elements be insufficient to meet the required emission reductions, developers must pay a fee that funds incentive projects to achieve off-site emissions reductions of NO_X, reactive organic gases (ROG), PM_{10}, and $PM_{2.5}$ from project vehicles and other mobile sources.

The comment states that according to Section 5.0 of the ISR rule, an Air Impact Assessment (AIA) application is required to be submitted no later than applying for project-level approval from a public agency. The comment states that the SJVAPCD has not received an AIA application for the proposed Project, and requests immediate submittal of an AIA application to the SJVAPCD to comply with SJVAPCD Rule 9510.

The proposed Project would comply with this rule. Under the Developer Mitigation Agreement (DMA) delineated in Mitigation Measure MM 4.3-4, the owner/operator is required to pay fees to fully mitigate construction and operational emissions of NO_X, ROG, PM_{10}, and $PM_{2.5}$ from project vehicles and other mobile sources. The DMA will be documented in the ISR application to be submitted to the SJVAPCD. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

3-I

The comment states that the proposed Project may be subject to SJVAPCD Rule 4601 since it may utilize architectural coatings. Architectural coatings are paints, varnishes, sealers, or stains that are applied to structures, portable buildings, pavements, or curbs. The purpose of this rule is to limit volatile organic compound (VOC) emissions from architectural coatings. In addition, this rule specifies architectural coatings storage, cleanup, and labeling requirements.

The proposed Project would comply with SJVAPCD Rule 4601 and utilize low-VOC architectural coatings and be subject to the list of requirements outlined in the link provided in this comment. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

3-J

The comment states that the Project proponent may be required to submit a Construction Notification Form or submit and receive approval of a Dust Control Plan prior to commencing any earthmoving activities, as described in Regulation VIII, specifically Rule 8021 – Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities. The comment further states that if the proposed Project is at least one acre in size, the Project proponent shall provide written notification to SJVAPCD at least 48 hours prior to the Project proponent's intent to commence any earthmoving activities pursuant to SJVAPCD Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities). Also, should the proposed Project result in the disturbance of 5 acres or more, or include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials, the Project proponent shall submit to SJVAPCD a Dust Control Plan pursuant to SJVAPCD Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities). The comment provides additional information about the Dust Control Plan online and via telephone.

The Project proponent will submit a Dust Control Plan as required by SJVAPCD and outlined under Mitigation Measure MM 4.3-2. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

3-K

The comment states that the proposed Project may be subject to SJVAPCD Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). The proposed Project will comply with Rule 4641 during construction and operation. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

3-L

The comment requests that a copy of the comments be provided to the Project proponent and provides closing remarks and contact information for appropriate SJVAPCD staff. The comments have been forwarded to the Project proponent. This comment does not otherwise raise a substantive issue on any of the content in the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary. The County thanks the author for their comments and participation in the public review of the document.

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4: Kern County Public Works—Development Review Division, Sewer and Water Division, Floodplain Management Division, and CSA Division

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Office Memorandum

To: Craig Murphy, Interim Director
Planning and Natural Resources Department
Attn: Jack Foster, Planner II

December 2, 2025

From: Cesar Ayon, Engineering Manager
Public Works Department/Development

Subject: 7-5.3 – Buttonbush Solar and Storage Project by 29SC 8me, LLC (PP24407)

Development Review Division

This Division has reviewed the subject project and has the following recommendation:

The County may require Irrevocable Offers of Dedication to future roadways that are not built to ultimate within the project boundary. 4-A

Thank you for the opportunity to comment on this project. If you have any questions or comments, please contact Rodd Parke of this Division at (661) 862-8848.

Floodplain Management Division

This Division has reviewed the subject project and has no comment. 4-B

Thank you for the opportunity to comment on this project. If you have any questions or comments, please contact Brian Blaise of this Division at (661) 862-5098.

Sewer and Water Division

This Division has reviewed the subject project and has no comment. 4-C

Thank you for the opportunity to comment on this project. If you have any questions or comments, please contact Kyle Perez of this Division at (661) 862-8852.

CSA Division

This Division has reviewed the subject project and has no comment. 4-D

Thank you for the opportunity to comment on this project. If you have any questions or comments, please contact Miguel Munoz of this Division at (661) 862-8908.

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Comment 4

Kern County Public Works—Development Review Division, Sewer and Water Division, Floodplain Management Division, and CSA Division

4-A

The comment states that County Public Works Department—Development Review Division has reviewed the proposed Project and has the following recommendation:

The County may require Irrevocable Offers of Dedication to future roadways that are not built to ultimate within the project boundary.

In response, Staff acknowledges the comment's request and confirms that, if requested, the Irrevocable Offers of Dedication will be included as conditions of approval for the requested Conditional Use Permits. Additionally, the author is thankful for the opportunity to comment on the proposed Project. The comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

4-B

The comment states that the County Public Works Department—Floodplain Management Division has reviewed the proposed Project and does not have further comment, and the author is thankful for the opportunity to comment on the proposed Project. The comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

4-C

The comment states that the County Public Works Department—Sewer and Water Division has reviewed the proposed Project and does not have further comment, and the author is thankful for the opportunity to comment on the proposed Project. The comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

4-D

The comment states that the County Public Works Department—CSA Division has reviewed the proposed Project and does not have further comment, and the author is thankful for the opportunity to comment on the proposed Project. The comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary. The County thanks the authors for their comments and participation in the public review of the document.

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5: Kern County Public Works—Surveyor

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December 12, 2025

To: Craigh Murphy, Director
Planning and Natural Resources Department
Jack Foster, Planner II

From: Jeremy M. Brock, County Surveyor
By: Andres Arias, Engineering Support Supervisor Phone: 28959

Subject: Draft Environmental Impact Report for the Buttonbush Solar and Storage Project by 29SC8me. (PP24407).

I have reviewed the above noted Draft of EIR and recommend the following conditions be placed on the Conditional Use Permits:

5-A

1. Prior to issuance of a building or grading permit: All survey monuments shall be tied out by a Licensed Land Surveyor. A corner record for each monument or record of survey shall be submitted to the County Surveyor for review and processing, per Section 8771 of the Professional Land Surveyor's (PLS) Act.

2. Prior to Final Inspection: All survey monuments that were destroyed during construction shall be re-set or have a suitable witness corner set. A post construction corner record for each monument re-set or a record of survey shall be submitted to the County Surveyor for processing, per Section 8771 of the Professional Land Surveyor's Act.

3. Upon completion of project: All survey monuments shall be accessible by a Licensed Land Surveyor or their representatives, with prior notice, per Section 8774 of the PLS Act and Civil Code 846.5 (a).

Thank you for the opportunity to review and comment on this project. Should you have any questions please contact me. 5-B

KERN COUNTY
Planning & Natural Resources

OFFICE MEMORANDUM

TO: Distribution List – PLEASE SIGN AND DATE BELOW AS SOON AS RECEIVED AND RETURN TO THE PLANNING & NATURAL RESOURCES DEPARTMENT BEFORE JANURARY 2ND, 2026

FROM: Jack Foster, Planner II
Planning & Natural Resources Department

DATE: November 18, 2025

SUBJECT: Draft Environmental Impact Report (EIR) – Buttonbush Solar and Storage Project by 29SC 8me, LLC. (PP24407)

Enclosed is a Notice of Availability with a link to access the Draft EIR for the above mentioned proposed project. The Kern County Planning and Natural Resources Department, as Lead Agency (per CEQA Guidelines Section 15050), solicits your review and comments of your agency as to the scope and content of the environmental information, which is germane to your agency's statutory responsibilities in connection with the proposed project.

The comment period for the Draft EIR is 45 days (Per CEQA Guidelines Section 15105), which ends on **Friday, January 2, 2026 at 5:00 pm.** Please submit your agency comments by that date and addressed to Jack Foster, Planner II at the Planning and Natural Resources Department.

In order to verify that this document was received by your department, **please date and sign this memo** and return by office mail to the Planning and Natural Resources Department, Attn: Jack Foster. Thank you in advance for your cooperation.

Distribution List (Kern County):

Administrative Office
Agriculture Department
PWD – Building & Development – Floodplain
PWD – Building & Development – Survey
Environmental Health Services
Fire Department – Aaron Duncan
Library/Beale – Local History Room
Library Director – Andie Sullivan
Library – Wasco
Library – Buttonwillow
Parks and Recreation
Sheriff Department – Administration
PWD – Building & Development – Development Review
PWD – Operations & Maintenance – Regulatory Monitoring & Reporting

Public Works-
Department: County Surveyor **Name:** Jeremy Brock **Date:** 11-18-2025

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Comment 5

Kern County Public Works—Surveyor

5-A

The comment states that the County Public Works Department—County Surveyor has reviewed the Draft EIR for the proposed Project and recommends the following conditions be placed on the proposed Project:

1. *Prior to issuance of a building or grading permit: All survey monuments shall be tied out by a Licensed Land Surveyor. A corner record for each monument or record of survey shall be submitted to the County Surveyor for review and processing, per Section 8771 of the Professional Land Surveyor's (PLS) Act.*
2. *Prior to final inspection: All survey monuments that were destroyed during construction shall be re-set or have a suitable witness corner set. A post construction corner record for each monument re-set or a record of survey shall be submitted to the County Surveyor for processing, per Section 8771 of the PLS Act.*
3. *Upon completion of the project: All survey monuments shall be accessible by a Licensed Land Surveyor or their representatives, with prior notice, per Section 8774 of the PLS Act and Civil Code 846.5(a).*

In response, Staff acknowledges the comment's requested conditions and confirms that all requested conditions will be included as conditions of approval for the requested Conditional Use Permits. The comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

5-B

The comment is a conclusion to the comment letter. The author is appreciative of the opportunity to comment on the proposed Project. The comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary. The County thanks the author for their comments and participation in the public review of the document.

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6: Kern County Fire Department

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Office of the Fire Marshal
Kern County Fire Department
Fire Prevention Unit

2820 M St. • Bakersfield, CA 93301 • www.kerncountyfire.org
Telephone 661-391-3310 • FAX 661-636-0466/67 • TTY Relay 800-735-2929

RECEIVED
DEC 19 2025
Kern County Planning &
Natural Resources Dept.

December 9, 2025

Kern County Planning and Natural Resources Department
2800 M St., Bakersfield, CA 93301
Attn.: Jack Foster, Planner II

Re: Kern County Fire Department Comments Regarding Planning Department Project

To Whom It May Concern,

The Kern County Fire Department (KCFD), as the local fire authority, has received a request for comments regarding Draft EIR for the Buttonbush Solar and Storage Project by 29SC 8me, LLC. (PP24407). Upon initial review, it has been determined that all ground mounted solar array projects over 1MW will require Fire Department plan review prior to construction and meet requirements set forth in KCFD Solar Panel Standard. Solar array projects over 20MW will require special fee calculation from KCFD prior to permit issuance. 6-A

All Battery Energy Storage Systems must be applied for directly with KCFD for separate permitting and pre-construction approval. All proposed batteries must be UL9540A 2019 4th Edition tested for large scale burns to determine adequate design and mitigation measures. Additionally, the 24,000 gallon fire water tank and fire alarm annunciator panel (Incident Command Post) must be located a minimum of 300' upwind from the nearest battery enclosure. Site emergency response access for the storage yards is preferred to be placed upwind of battery enclosures based on the prevailing winds in the area of construction. 6-B

A more detailed review and project comments will be conducted when the building permit is obtained, and plans are submitted to KCFD. 6-C

Please feel free to call our Fire Prevention Office at (661) 391-3310 with any questions.

Respectfully,
Kaylee Schoenheide
Fire Plans Examiner
Kern County Fire Department

KERN COUNTY
Planning & Natural Resources

Craig M. Murphy, Interim Director
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2323
Phone: (661) 862-8600
TTY Relay 1-800-735-2929
Email: planning@kerncounty.com
Web Address: https://kernplanning.com

NOTICE OF AVAILABILITY FOR PUBLIC REVIEW AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED BUTTONBUSH SOLAR STORAGE PROJECT

This is to advise that the Kern County Planning and Natural Resources Department has prepared a Draft 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: Draft EIR for the Buttonbush Solar and Storage Project by 29SC 8me, LLC. (PP24407); *Site 1:* CUP No. 17, Map 98; CUP No. 19, Map 98; CUP No. 25, Map 99; GPA No. 4, Map 98; SPA No. 5, Map 98; GPA No. 8, Map 99; Williamson Act Land Use Contract Cancellations; Farmland Security Zone Contract Cancellation; Non-Summary Vacation, Map 99. *Site 2:* CUP No. 14, Map 77; CUP No. 20, Map 77; CUP No. 18, Map 98; GPA No. 10, Map 77; Williamson Act Land Use Contract Cancellations. *Site 3:* CUP No. 15, Map 77; GPA No. 11, Map 77; Williamson Act Land Use Contract Cancellations. *Site 4:* CUP No. 16, Map 77; GPA No. 12, Map 77; Williamson Act Land Use Contract Cancellation. *Site 5:* CUP No. 26, Map 99; CUP No. 27, Map 99; CUP No. 28, Map 99; CUP No. 61, Map 100; GPA No. 10, Map 99; GPA No. 31, Map 100; Williamson Act Land Use Contract Cancellations; Non-Summary Vacation, Map 99. *Site 6:* CUP No. 17, Map 78; GPA No. 10, Map 78; Williamson Act Land Use Contract Cancellations. *Site 8:* CUP No. 12, Map 54; CUP No. 17, Map 77; CUP No. 18, Map 77; CUP No. 19, Map 77; GPA No. 1, Map 54; GPA No. 13, Map 77; Williamson Act Land Use Contract Cancellations.

PROJECT LOCATION: The several separate sites of the proposed Project are entirely located within unincorporated Kern County, directly north of the community of Buttonwillow, approximately four miles west of the City of Bakersfield, two miles west of the City of Shafter, and seven miles southwest of the City of Wasco. The proposed Project straddles and crosses Interstate 5 (I-5) and is east of Buttonwillow Raceway Park, north of State Route (SR) 58, and south of Kimberlina Road.

DOCUMENT AVAILABILITY: The Draft EIR and the documents referenced in it are available for public review at the Planning and Natural Resources Department, which is located at 2700 "M" Street, Suite 100, in Bakersfield, CA 93301 or on the Department website at:

https://kernplanning.com/environmental-doc/buttonbush-solar-project/

PUBLIC COMMENT: The required Draft EIR public review period is 45 days.

November 18th, 2025 – January 2nd, 2026

Written comments may be submitted to the project planner identified below prior to the close of the Draft EIR public review period on **January 2nd, 2026, at 5:00 p.m.** to:

Kern County Planning and Natural Resources Department
ATTN: Jack Foster, Planner II
2700 "M" Street, Suite 100, Bakersfield, CA 93301
Phone: (661) 862-5010
E-mail: Fosterja@kerncounty.com

PUBLIC HEARING: A public hearing has been scheduled with the Kern County Planning Commission to consider a recommendation on the proposed project and solicit 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:	**February 12, 2026**
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 93301**

After consideration by the Planning Commission, a public hearing will be scheduled for the Kern County Board of Supervisors for final consideration and action. Comments may be provided at that hearing or prior to any action by the Board of Supervisors on any matter. The Board of Supervisors decision is final.

If you challenge the action taken on this request in court, you may be limited to raising only those issues you or someone else raised at this public hearing, or in written correspondence delivered to the Planning and Natural Resources Department at, or prior to, the public hearing.

PROJECT DESCRIPTION: The proposed Buttonbush Solar and Storage Project as proposed by 29SC 8me, LLC. would allow for the construction and operation of a photovoltaic (PV) solar facility with the associated infrastructure on 7 proposed project sites that would collectively generate up to 2,000 megawatts (MW) or 2 gigawatts (GW) of renewable electrical energy including a battery energy storage system (BESS) with the capacity of storing approximately 16,000 megawatt-hours (MWh) or 16 gigawatt-hours (GWh) on approximately 11,983 acres across 128 privately owned parcels in an unincorporated area of northwestern Kern County. Implementation of the proposed project includes requests for multiple General and Specific Plan Amendments (GPAs/SPAs), Conditional Use Permits (CUPs), the cancellation of Williamson Act Land Use and Farmland Security Zone Contracts (WALUC/FSZC), and Non-Summary Street Vacations (NSV) from the Kern County Planning & Natural Resources Department.

ENVIRONMENTAL REVIEW FINDINGS: Anticipated significant and unavoidable impacts on Aesthetics and Visual Resources (Visual Character), Agricultural Resources, Air Quality (Construction), Biological Resources, Mineral Resources, Wildfire.

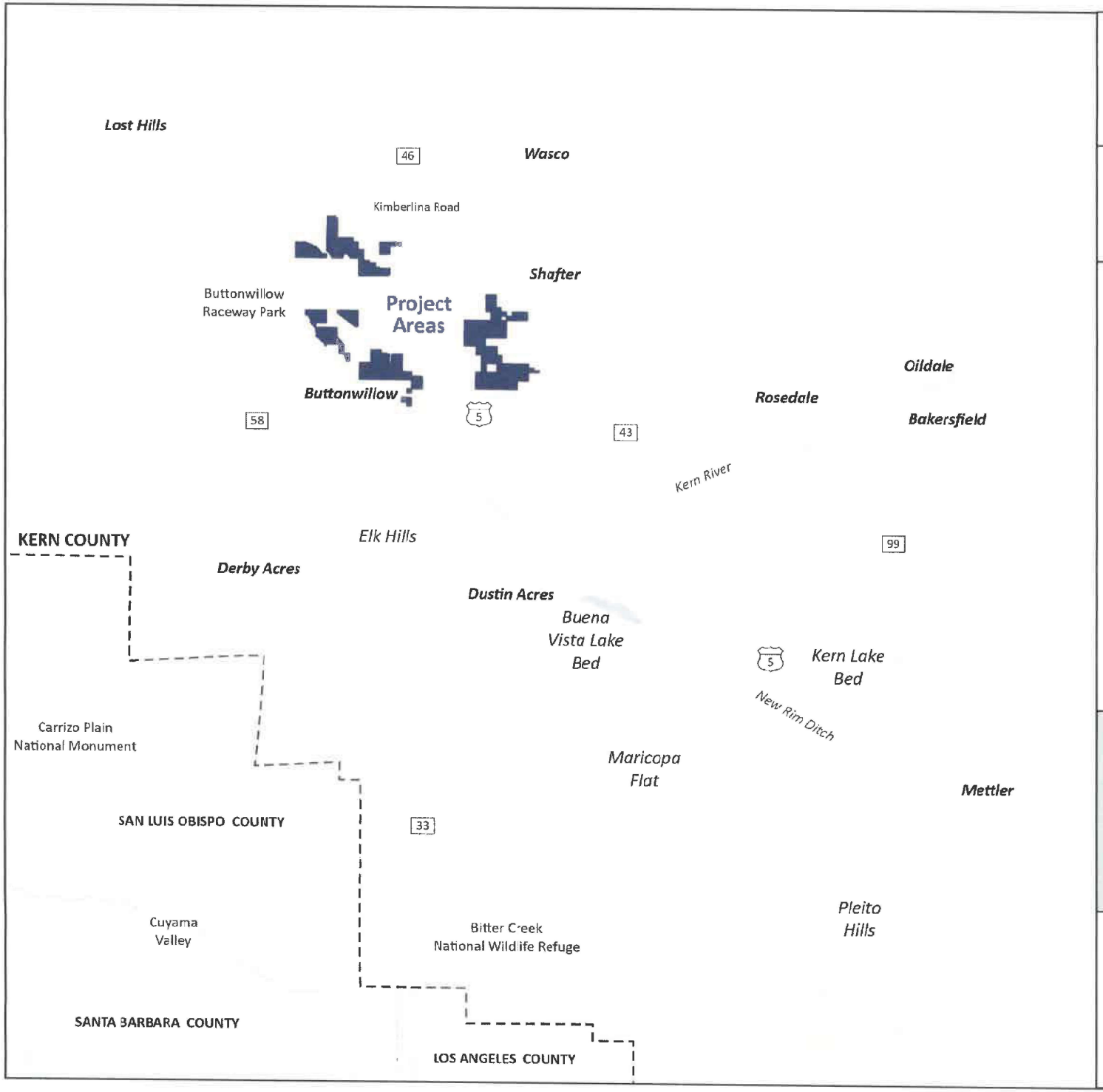
CRAIG MURPHY, Interim Director
Planning and Natural Resources Department

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

THE BAKERSFIELD CALIFORNIAN

JF (11/18/25)

cc: County Clerk (2) (with fee)
Environmental Status Board
Supervisorial District No. 4



Buttonbush Solar and Storage Project
by 29SC 8me LLC

Draft Environmental Impact Report

Regional Vicinity Map

Project Areas
Kern County Boundary



Date Exported: 1/24/2025

0 5 10 Miles

Kern County Planning & Natural Resources Department

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Comment 6

Kern County Fire Department

6-A

The comment describes the Kern County Fire Department's (KCFD) local regulatory authority to enforce state and local codes related to fire protection and health and safety. The comment states that the proposed Project will be required to meet standards set forth by the KCFD and to submit plans and obtain a permit from the KCFD for installation of a BESS. Additionally, the comment indicates that the proposed Project would be subject to payment of applicable fees prior to permit issuance.

6-B

The comment states requirements necessary for KCFD approval of permits. The County acknowledges the comments provided; such requirements as stated will be made conditions of approval for the proposed Project. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comments provided have been noted for the record, and no revisions to the Draft EIR are required.

6-C

The comment states that KCFD will provide more detailed review comments at the time of KCFD plan review and building permit issuance. This comment does not raise a substantive issue on the content of the Draft EIR. The comments provided have been noted for the record, and revisions to the Draft EIR are not required. The County thanks the author for their comments and participation in the public review of the environmental document.

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7: Kern County Environmental Health Division

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INTEROFFICE MEMORANDUM

To: Jack Foster, Planner II
From: Dayana Torres, REHS
Subject: Buttonbush Solar and Storage
APN(s): Several

Date: December 23, 2025

The Kern County Environmental Health Division has reviewed the above-referenced project. This Division holds local regulatory authority to enforce applicable state regulations and local codes related to waste discharge, water supply requirements, and other factors that may impact the health and safety of the public, or the environment.

7-A

The Environmental Health Division requests that the following condition(s) be placed on the subject project prior to the issuance of building permits:

1. The method of water supply for the site shall be approved by the Environmental Health Division.
    a. The applicant shall submit an unconditional "will serve" letter from the water purveyor stating its intent and ability to provide potable water for the proposed project (as applicable).
    b. If the well provides water to an average of 25 individuals for more than 60 days out of the year, approval must be obtained from the State Water Resources Control Board, Division of Drinking Water (as applicable).
2. The applicant shall submit a commercial septic system application(s) directly to the Environmental Health Division for review and approval.
    a. Any designed wastewater flow exceeding 10,000 gallons per day will be regulated by the Regional Water Quality Control Board.
3. The applicant shall register with the California Environmental Reporting System (CERS) within 30 days of receiving or storing hazardous material or hazardous waste material.

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Comment 7

Kern County Environmental Health Division

7-A

The comment confirms review of the Draft EIR for the proposed Project and describes the Kern County Environmental Health Division's role, which is to enforce state regulations and local codes as they relate to waste discharge, water supply requirements, and other items that may impact the health and safety of the public or the environment. In response, the Lead Agency acknowledges that the Environmental Health Division is the responsible agency to enforce state regulations and local codes as they relate to waste discharge, water supply requirements, and other items that may impact public health or the environment. Furthermore, the comments state the Environmental Health Division requests the following conditions be placed on the proposed Project and be satisfied prior to the issuance of building permits:

1. *The method of water supply for the site shall be approved by the Environmental Health Division.*
    a. *The applicant shall submit an unconditional "will serve" letter from the water purveyor stating its intent and ability to provide potable water for the proposed project (as applicable).*
    b. *If the well provides water to an average of 25 individuals for more than 60 days out of the year, approval must be obtained from the State Water Resources Control Board, Division of Drinking Water (as applicable).*
2. *The applicant shall submit a commercial septic system application(s) directly to the Environmental Health Division for review and approval.*
    a. *Any designated wastewayer flow exceeding 10,000 gallons per day will be regulated by the Regional Water Quality Control Board.*
3. *The applicant shall register with the California Environmental Reporting System (CERS) within 30 days of receiving or storing hazardous materials or hazardous waste material.*

In response, Mitigation Measure MM 4.17-1 requires the method of sewage disposal for the O&M building(s) that include facilities which will generate wastewater requiring sanitary disposal (e.g., restrooms) to be as required and approved by the Kern County Public Health Services Department. Additionally, Mitigation Measure MM 4.9-1 requires registration with CERS and the preparation of a Hazardous Materials Business Plan.

Staff acknowledges the comment's request and confirms the conditions will be included as conditions of approval for the requested Conditional Use Permits. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary. The County thanks the author for their comments and participation in the public review of the document.

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8: Kern County Superintendent of Schools

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KCSOS
Kern County Superintendent of Schools
Office of John G. Mendiburu, Ed.D. — Advocates For Children

RECEIVED
DEC 02 2025
Kern County Planning &
Natural Resources Dept.

November 25, 2025

Kern County Planning Department
Attn: Jack Foster, Planner II
2700 M Street, Suite 100
Bakersfield, CA 93301

Our File No.: CO25-0151

RE: DEVELOPER FEES FOR: Draft Environmental Impact Report; Buttonbush Solar Project; Map No. 77-27, 98-11 & 12, 99-2, 11-14
(East of Buttonwillow Raceway Park, north of Highway 58, south of Kimberlina Rd with the majority of the site being on the NE side of the I-5.)

Dear Mr. Foster,

This office represents the Buttonwillow, Maple and Rio Bravo Greeley Union Elementary and Wasco Joint Union and Kern High School Districts with regard to the imposition of school facility fees and appreciates the opportunity to respond on behalf of the districts regarding the proposed project. This letter is limited to addressing the possible effects which the project might have on school facilities created by students attributable to the project. It is not intended to address other possible environmental concerns which might be identified by the district(s) after reviewing it. 8-A

It is our determination that the above-mentioned Notice of Preparation of a Draft Environmental Impact Report for the Buttonbush Solar project proposing eight sites, multiple Conditional Use Permits, General Plan Amendments, Specific Plan Amendments, and Cancelations to Williamson Act Land Use Contracts to construct and operate a commercial scale solar facility will not have significant effects on either of these district's facilities and mitigation of this project's impacts on public school facilities will be limited to the collection of statutory fees authorized under Education Code Section 17620 and Government Code Sections 65995 et seq. (all as amended with an operative date of November 4, 1998) at the time that building permits are issued. Currently, these fees are set at $0.84 per square foot, an amount subject to COLA adjustment every two years with 2026 being an adjustment year. 8-B

Thank you for the opportunity to comment on the project. Should you have any questions, or if we can be of any further assistance in this matter, please contact me at 636-4599, or through e-mail at anwatson@kern.org.

Sincerely,

Andrea Watson, Specialist
School District Facility Services

Cc: Districts

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Comment 8

Kern County Superintendent of Schools

8-A

The comment expresses appreciation for the opportunity to respond on behalf of the district regarding the proposed Project. This comment clarifies that the letter's contents are intended to address possible effects that the proposed Project may have on school facilities, and not to comment on any other environmental concerns.

8-B

The comment provides a brief overview of the entitlements being requested by the proposed Project and concludes that no significant effect on the District's facilities would occur with project implementation, given the appropriate fees and regulations are complied with. The comment references the "abovementioned Notice of Preparation of a Draft Environmental Impact Report for the Buttonbush Solar Project;" however, the comment is in response to the Draft EIR for the Buttonbush Solar and Storage Project. Additionally, the comment states that the proposed Project consists of eight sites. As proposed in the Notice of Preparation (NOP) published on April 24, 2024, the Buttonbush Solar and Storage Project previously consisted of a total of eight sites. The previously proposed Site 7 has since been withdrawn, and no analysis regarding Site 7 has been included in the Draft EIR. As discussed in Section 4.14, *Public Services*, of the Draft EIR, an average of up to 800 daily construction workers and a peak workforce of 1,334 workers could be required for development of the proposed Project. It is expected that most of these workers would live in the region and would commute to the Project site from where their children are already enrolled in school. Even if workers came from out of the area, they would likely return to their out-of-town residences once the facilities were built and would not take their children out of their current schooling situation. Therefore, temporary increases in population are not expected to adversely affect local school populations.

Additionally, operation of the proposed Project would require up to 20 full-time employees to perform operational and maintenance activities. Employees would likely commute to the proposed Project from their existing permanent residences; however, even if the maintenance employees were hired from out of the area and had to relocate to Kern County, the resulting addition of potential families to this area would not result in a substantial increase in the number of users at local schools. Therefore, impacts would be less than significant. All fees applicable to implementation of the proposed Project will be collected when the Project proponent/operator applies for required building permits. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not required. The County thanks the author for their comments and participation in the public review of the environmental document.

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7.2.3 Interested Parties

9: Western States Regional Council of Carpenters/Mitchell M. Tsai Law Firm

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P: (626) 314-3821
E: info@mitchtsailaw.com

Mitchell M. Tsai
Law Firm

139 S. Hudson Ave., Suite 200
Pasadena, California 91101

VIA E-MAIL

January 2, 2025

Jamal Ferguson, Planner I
Kern County Planning and Natural Resources Department
County of Kern
2700 "M" Street Suite 100
Bakersfield, CA 93301
Ph: (661)-862-5017
Em: fergusonj@kerncounty.com

RE: County of Kern Buttonbush Solar and Storage Project – Draft Environmental Impact Report (SCH# 202404041028)

Dear Jamal Ferguson,

On behalf of the Western States Regional Council of Carpenters ("**Western Carpenters**" or "**WSRCC**"), our firm is submitting these comments in connection with the County of Kern ("**County**") Buttonbush Solar and Storage Project ("**Project**") and the Draft Environmental Impact Report ("**DEIR**") associated therewith.

The Notice of Availability of the Project's DEIR describes the Project as follows:

> The proposed Buttonbush Solar and Storage Project as proposed by 29SC 8me, LLC. would allow for the construction and operation of a photovoltaic (PV) solar facility with the associated infrastructure on 7 proposed project sites that would collectively generate up to 2,000 megawatts (MW) or 2 gigawatts (GW) of renewable electrical energy including a battery energy storage system (BESS) with the capacity of storing approximately 16,000 megawatt-hours (MWh) or 16 gigawatt-hours (GWh) on approximately 11,983 acres across 128 privately owned parcels in an unincorporated area of northwestern Kern County. Implementation of the proposed project includes requests for multiple General and Specific Plan Amendments (GPAs/SPAs), Conditional Use Permits (CUPs), the cancellation of Williamson Act Land Use and

9-A

> Farmland Security Zone Contracts (WALUC/FSZC), and Non-Summary Street Vacations (NSV) from the Kern County Planning & Natural Resources Department.

NOA, p. 2.

The Western States Regional Council of Carpenters is a labor union representing almost 90,000 union carpenters in 12 states, including California, and has a strong interest in well-ordered land use planning and in addressing the environmental impacts of development projects.

Individual members of the Western Carpenters live, work, and recreate in the County and surrounding communities and would be directly affected by the Project's environmental impacts.

The Western Carpenters expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearing and proceeding related to this Project. Gov. Code, § 65009, subd. (b); Pub. Res. Code, § 21177, subd. (a); see *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal.App.4th 1184, 1199-1203; see also *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal.App.4th 1109, 1121. 9-A

The Western Carpenters incorporates by reference all comments raising issues regarding the Environmental Impact Report (EIR) submitted prior to certification of the EIR for the Project. See *Citizens for Clean Energy v City of Woodland* (2014) 225 Cal.App.4th 173, 191 (finding that any party who has objected to the project's environmental documentation may assert any issue timely raised by other parties).

Moreover, the Western Carpenters requests that the County provide notice for any and all notices referring or related to the Project issued under the California Environmental Quality Act (**CEQA**) (Pub. Res. Code, § 21000 *et seq.*), and the California Planning and Zoning Law ("**Planning and Zoning Law**") (Gov. Code, §§ 65000–65010). California Public Resources Code Sections 21092.2, and 21167(f) and California Government Code Section 65092 require agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

I. THE COUNTY SHOULD REQUIRE THE USE OF A LOCAL WORKFORCE TO BENEFIT THE COMMUNITY'S ECONOMIC DEVELOPMENT AND ENVIRONMENT

The County should require the Project to be built using local workers who have graduated from a Joint Labor-Management Apprenticeship Program approved by the State of California, have at least as many hours of on-the-job experience in the applicable craft which would be required to graduate from such a state-approved apprenticeship training program, or who are registered apprentices in a state-approved apprenticeship training program.

Community benefits such as local hire can also be helpful to reduce environmental impacts and improve the positive economic impact of the Project. Local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of the Project site can reduce the length of vendor trips, reduce greenhouse gas emissions, and provide localized economic benefits. As environmental consultants Matt Hagemann and Paul E. Rosenfeld note: 9-B

> [A]ny local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling.

Workforce requirements promote the development of skilled trades that yield sustainable economic development. As the California Workforce Development Board and the University of California, Berkeley Center for Labor Research and Education concluded:

> [L]abor should be considered an investment rather than a cost—and investments in growing, diversifying, and upskilling California's workforce can positively affect returns on climate mitigation efforts. In other words,

> well-trained workers are key to delivering emissions reductions and moving California closer to its climate targets.[1]

Furthermore, workforce policies have significant environmental benefits given that they improve an area's jobs-housing balance, decreasing the amount and length of job commutes and the associated greenhouse gas (GHG) emissions. In fact, on May 7, 2021, the South Coast Air Quality Management District found that that the "[u]se of a local state-certified apprenticeship program" can result in air pollutant reductions.[2]

Locating jobs closer to residential areas can have significant environmental benefits. As the California Planning Roundtable noted in 2008:

9-B

> People who live and work in the same jurisdiction would be more likely to take transit, walk, or bicycle to work than residents of less balanced communities and their vehicle trips would be shorter. Benefits would include potential reductions in both vehicle miles traveled and vehicle hours traveled.[3]

Moreover, local hire mandates and skill-training are critical facets of a strategy to reduce vehicle miles traveled (VMT). As planning experts Robert Cervero and Michael Duncan have noted, simply placing jobs near housing stock is insufficient to achieve VMT reductions given that the skill requirements of available local jobs must match those held by local residents.[4] Some municipalities have even tied local hire and

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[1] California Workforce Development Board (2020) Putting California on the High Road: A Jobs and Climate Action Plan for 2030 at p. ii, *available at* https://laborcenter.berkeley.edu/wp-content/uploads/2020/09/Putting-California-on-the-High-Road.pdf.

[2] South Coast Air Quality Management District (May 7, 2021) Certify Final Environmental Assessment and Adopt Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions Program, and Proposed Rule 316 – Fees for Rule 2305, Submit Rule 2305 for Inclusion Into the SIP, and Approve Supporting Budget Actions, *available at* http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf?sfvrsn=10.

[3] California Planning Roundtable (2008) Deconstructing Jobs-Housing Balance at p. 6, *available at* https://cproundtable.org/static/media/uploads/publications/cpr-jobs-housing.pdf

[4] Cervero, Robert and Duncan, Michael (2006) Which Reduces Vehicle Travel More: Jobs-Housing Balance or Retail-Housing Mixing? Journal of the American Planning Association 72 (4), 475-490, 482, *available at* http://reconnectingamerica.org/assets/Uploads/UTCT-825.pdf.

other workforce policies to local development permits to address transportation issues. Cervero and Duncan note that:

> In nearly built-out Berkeley, CA, the approach to balancing jobs and housing is to create local jobs rather than to develop new housing. The city's First Source program encourages businesses to hire local residents, especially for entry- and intermediate-level jobs, and sponsors vocational training to ensure residents are employment-ready. While the program is voluntary, some 300 businesses have used it to date, placing more than 3,000 city residents in local jobs since it was launched in 1986. When needed, these carrots are matched by sticks, since the city is not shy about negotiating corporate participation in First Source as a condition of approval for development permits.

9-B

Recently, the State of California verified its commitment towards workforce development through the Affordable Housing and High Road Jobs Act of 2022, otherwise known as Assembly Bill No. 2011 ("**AB2011**"). AB2011 amended the Planning and Zoning Law to allow ministerial, by-right approval for projects being built alongside commercial corridors that meet affordability and labor requirements.

The County should consider utilizing local workforce policies and requirements to benefit the local area economically and to mitigate greenhouse gas, improve air quality, and reduce transportation impacts.

II. THE COUNTY SHOULD IMPOSE TRAINING REQUIREMENTS FOR THE PROJECT'S CONSTRUCTION ACTIVITIES TO PREVENT COMMUNITY SPREAD OF COVID-19 AND OTHER INFECTIOUS DISEASES

Construction work has been defined as a Lower to High-risk activity for COVID-19 spread by the Occupations Safety and Health Administration. Recently, several construction sites have been identified as sources of community spread of COVID-19.[5]

9-C

[5] Santa Clara County Public Health (June 12, 2020) COVID-19 CASES AT CONSTRUCTION SITES HIGHLIGHT NEED FOR CONTINUED VIGILANCE IN SECTORS THAT HAVE REOPENED, *available at* https://www.sccgov.org/sites/covid19/Pages/press-release-06-12-2020-cases-at-construction-sites.aspx.

Western Carpenters recommend that the Lead Agency adopt additional requirements to mitigate public health risks from the Project's construction activities. Western Carpenters requests that the Lead Agency require safe on-site construction work practices as well as training and certification for any construction workers on the Project Site.

In particular, based upon Western Carpenters' experience with safe construction site work practices, Western Carpenters recommends that the Lead Agency require that while construction activities are being conducted at the Project Site:

Construction Site Design:

- The Project Site will be limited to two controlled entry points.
- Entry points will have temperature screening technicians taking temperature readings when the entry point is open.
- The Temperature Screening Site Plan shows details regarding access to the Project Site and Project Site logistics for conducting temperature screening.
- A 48-hour advance notice will be provided to all trades prior to the first day of temperature screening.
- The perimeter fence directly adjacent to the entry points will be clearly marked indicating the appropriate 6-foot social distancing position for when you approach the screening area. Please reference the Apex temperature screening site map for additional details.
- There will be clear signage posted at the project site directing you through temperature screening.
- Provide hand washing stations throughout the construction site.

Testing Procedures:

- The temperature screening being used are non-contact devices.
- Temperature readings will not be recorded.

9-C

- Personnel will be screened upon entering the testing center and should only take 1-2 seconds per individual.
- Hard hats, head coverings, sweat, dirt, sunscreen or any other cosmetics must be removed on the forehead before temperature screening.
- Anyone who refuses to submit to a temperature screening or does not answer the health screening questions will be refused access to the Project Site.
- Screening will be performed at both entrances from 5:30 am to 7:30 am.; main gate [ZONE 1] and personnel gate [ZONE 2]
- After 7:30 am only the main gate entrance [ZONE 1] will continue to be used for temperature testing for anybody gaining entry to the project site such as returning personnel, deliveries, and visitors.
- If the digital thermometer displays a temperature reading above 100.0 degrees Fahrenheit, a second reading will be taken to verify an accurate reading.
- If the second reading confirms an elevated temperature, DHS will instruct the individual that he/she will not be allowed to enter the Project Site. DHS will also instruct the individual to promptly notify his/her supervisor and his/her human resources (HR) representative and provide them with a copy of Annex A.

9-C

Planning

- Require the development of an Infectious Disease Preparedness and Response Plan that will include basic infection prevention measures (requiring the use of personal protection equipment), policies and procedures for prompt identification and isolation of sick individuals, social distancing (prohibiting gatherings of no more than 10 people including all-hands meetings and all-hands lunches)

> communication and training and workplace controls that meet standards that may be promulgated by the Center for Disease Control, Occupational Safety and Health Administration, Cal/OSHA, California Department of Public Health or applicable local public health agencies.[6]

The United Brotherhood of Carpenters and Carpenters International Training Fund has developed COVID-19 Training and Certification to ensure that Carpenter union members and apprentices conduct safe work practices. The Agency should require that all construction workers undergo COVID-19 Training and Certification before being allowed to conduct construction activities at the Project Site.

9-C

Western Carpenters has also developed a rigorous Infection Control Risk Assessment ("**ICRA**") training program to ensure it delivers a workforce that understands how to identify and control infection risks by implementing protocols to protect themselves and all others during renovation and construction projects in healthcare environments.[7]

ICRA protocols are intended to contain pathogens, control airflow, and protect patients during the construction, maintenance and renovation of healthcare facilities. ICRA protocols prevent cross contamination, minimizing the risk of secondary infections in patients at hospital facilities.

The County should require the Project to be built using a workforce trained in ICRA protocols.

III. THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

9-D

CEQA is a California statute designed to inform decision-makers and the public about the potential significant environmental effects of a project. 14 California Code of Regulations ("**CEQA Guidelines**"), § 15002, subd. (a)(1).[8] At its core, its purpose

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[6] *See also* The Center for Construction Research and Training, North America's Building Trades Unions (April 27 2020) NABTU and CPWR COVIC-19 Standards for U.S Constructions Sites, *available at* https://www.cpwr.com/sites/default/files/NABTU_CPWR_Standards_COVID-19.pdf; Los Angeles County Department of Public Works (2020) Guidelines for Construction Sites During COVID-19 Pandemic, *available at* https://dpw.lacounty.gov/building-and-safety/docs/pw_guidelines-construction-sites.pdf.

[7] For details concerning Western Carpenters' ICRA training program, *see* https://www.swmsctf.org/courses/icra-best-practices-in-health-care-construction/

[8] The CEQA Guidelines, codified in Title 14 of the California Code of Regulations, section 15000 et seq., are regulatory guidelines promulgated by the state Natural Resources Agency for the

is to "inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR 'protects not only the environment but also informed self-government[.]'" *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564 (internal citation omitted).

To achieve this purpose, CEQA mandates preparation of an Environmental Impact Report ("**EIR**") for projects so that the foreseeable impacts of pursuing the project can be understood and weighed. *Communities for a Better Environment v. Richmond* (2010) 184 Cal. App. 4th 70, 80. The EIR requirement "is the heart of CEQA." CEQA Guidelines, § 15003(a).

9-D

CEQA directs public agencies to avoid or reduce environmental damage, when possible, by requiring alternatives or mitigation measures. CEQA Guidelines, § 15002, subds. (a)(2)-(3); see also *Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners of the City of Oakland* (2001) 91 Cal.App.4th 1344, 1354; *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 400. The Environmental Impact Report (EIR) serves to provide public agencies and the public in general with information about the effect that a proposed project is likely to have on the environment and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines, § 15002, subd. (a)(2).

A public agency must prepare an EIR whenever substantial evidence supports a "fair argument" that a proposed project "may have a significant effect on the environment." Pub. Res. Code, §§ 21100, 21151; CEQA Guidelines, §§ 15002, subds. (f)(1)-(2), 15063; *No Oil, supra,* 13 Cal.App.3d at p. 75; *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 111-112. If the project has a significant effect on the environment, the agency may approve the project only upon finding that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns" specified in Public Resources Code section 21081. See CEQA Guidelines, §§ 15092, subds. (b)(2)(A)-(B).

Essentially, should a lead agency be presented with a fair argument that a project may have a significant effect on the environment, the lead agency shall prepare an EIR

implementation of CEQA. Pub. Res. Code, § 21083. The CEQA Guidelines are given "great weight in interpreting CEQA except when . . . clearly unauthorized or erroneous." *Center for Biological Diversity v. Dept. of Fish & Wildlife* (2015) 62 Cal.4th 204, 217.

even though it may also be presented with other substantial evidence that the project will not have a significant effect. CEQA Guidelines, §§ 15064(f)(1)-(2); see *No Oil, supra,* 13 Cal.App.3d at p. 75 (internal citations and quotations omitted). Substantial evidence includes "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." CEQA Guidelines, § 15384, subd. (a).

The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 ("*Berkeley Jets"*); *County of Inyo v. Yorty* (1973) 32 Cal. App. 3d 795, 810. 9-D

The preparation and circulation of an EIR is more than a set of technical hurdles for agencies and developers to overcome. *Communities for a Better Environment v. Richmond* (2010) 184 Cal.App.4th 70, 80 (quoting *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 449-450). The EIR's function is to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences and, equally important, that the public is assured those consequences have been considered. *Id.* For the EIR to serve these goals it must present information so that the foreseeable impacts of pursuing the project can be understood and weighed, and the public must be given an adequate opportunity to comment on that presentation before the decision to go forward is made. *Id.*

A strong presumption in favor of requiring preparation of an EIR is built into CEQA. This presumption is reflected in what is known as the "fair argument" standard under which an EIR must be prepared whenever substantial evidence in the record supports a fair argument that a project may have a significant effect on the environment. *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1602; *Friends of "B" St. v. City of Hayward* (1980) 106 Cal.3d 988, 1002.

Further, it is the duty of the lead agency, not the public, to conduct the proper environmental studies. "The agency should not be allowed to hide behind its own failure to gather relevant data." *Sundstrom, supra,* 202 Cal.App.3d at p. 311. "Deficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences." *Ibid*; see also *Gentry v. City of*

Murrieta (1995) 36 Cal.App.4th 1359, 1382 (lack of study enlarges the scope of the fair argument which may be made based on the limited facts in the record).

Thus, refusal to complete recommended studies lowers the already low threshold to establish a fair argument. The court may not exercise its independent judgment on the omitted material by determining whether the ultimate decision of the lead agency would have been affected had the law been followed. *Environmental Protection Information Center v. Cal. Dept. of Forestry* (2008) 44 Cal.4th 459, 486 (internal citations and quotations omitted). The remedy for this deficiency would be for the trial court to issue a writ of mandate. *Ibid.*

While the courts review an EIR using an 'abuse of discretion' standard, the reviewing court is not to *uncritically* rely on every study or analysis presented by a project proponent in support of its position. *Berkeley Keep Jets*, *supra*, 91 Cal.App.4th at p. 1355 (quoting *Laurel Heights, supra,* 47 Cal.3d at pp. 391, 409 fn. 12) (internal quotations omitted). A clearly inadequate or unsupported study is entitled to no judicial deference. *Ibid.* Drawing this line and determining whether the EIR complies with CEQA's information disclosure requirements presents a question of law subject to independent review by the courts. *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 515; *Madera Oversight Coalition, Inc. v. County of Madera* (2011) 199 Cal.App.4th 48, 102, 131. As the First District Court of Appeal has previously stated, prejudicial abuse of discretion occurs if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process. *Berkeley Keep Jets, supra*, 91 Cal.App.4th at p. 1355 (internal quotations omitted). 9-D

Both the review for failure to follow CEQA's procedures and the fair argument test are questions of law, thus, the de novo standard of review applies. *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435. Whether the agency's record contains substantial evidence that would support a fair argument that the project may have a significant effect on the environment is treated as a question of law. *Consolidated Irrigation Dist.*, *supra*, 204 Cal.App.4th at p. 207; Kostka and Zischke, Practice Under the Environmental Quality Act (2017, 2d ed.) at § 6.76.

Section 15088.5(a) of the CEQA Guidelines provides that an EIR must be recirculated whenever there is disclosure of significant new information. Significant new information includes: (1) disclosure of a new significant environmental impact resulting from the project or from a new proposed mitigation measure; (2) disclosure

of a substantial increase in the severity of an environmental impact unless mitigation measures are adopted that reduce the impact to a level of insignificance; and (3) disclosure of a feasible project alternative or mitigation measure considerably different from others previously analyzed which would clearly lessen the significant environmental impacts of the project which the project proponents decline to adopt. *Id.*

9-D

Additionally, an EIR must be recirculated when it is so fundamentally inadequate and conclusory in nature that meaningful public review and comment is precluded. *Id.* [citing *Mountain Lion Coalition v. Fish & Game Com.* (1989) 214 Cal.App.3d 1043].

Here, as further discussed in the section below, the DEIR fails to substantiate all of its conclusions to allow meaningful public review and comment, provide adequate mitigation measures, and fully assess all pertinent environmental factors. Accordingly, this comment letter discloses significant new information, necessitating revision and recirculation of the DEIR.

IV. THE DEIR IS INADEQUATE UNDER CEQA AND SHOULD BE REVISED AND RECIRCULATED

A. The DEIR Fails to Support Its Findings with Substantial Evidence

CEQA requires that an EIR identify and discuss the significant effects of a Project, and how those significant effects can be mitigated or avoided. CEQA Guidelines § 15126.2; PRC §§ 21100(b)(1), 21002.1(a). If a project has a significant effect on the environment, an agency may approve the project only upon finding that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns." CEQA Guidelines § 15092(b)(2) (A–B). Such findings must be supported by substantial evidence. CEQA Guidelines § 15091(b).

9-E

When new information is brought to light showing that an impact previously discussed in the DEIR but found to be insignificant with or without mitigation in the DEIR's analysis has the potential for a significant environmental impact supported by substantial evidence, the DEIR must consider and resolve the conflict in the evidence. See *Visalia Retail, L.P. v. City of Visalia* (2018) 20 Cal.App.5th 1, 13, 17; see also *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal. App. 4th 1099, 1109. While a lead agency has discretion to formulate standards for determining significance and the need for mitigation measures—the choice of any standards or

thresholds of significance must be "based to the extent possible on scientific and factual data and an exercise of reasoned judgment based on substantial evidence. CEQA Guidelines § 15064(b); *Cleveland Nat'l Forest Found. v. San Diego Ass'n of Gov'ts* (2017) 3 Cal. App. 5th 497, 515; *Mission Bay Alliance v. Office of Community Inv. & Infrastructure* (2016) 6 Cal. App. 5th 160, 206. And when there is evidence that an impact could be significant, an EIR cannot adopt a contrary finding without providing an adequate explanation along with supporting evidence. *East Sacramento Partnership for a Livable City v. City of Sacramento* (2016) 5 Cal. App. 5th 281, 302.

9-E

Here, for the reasons discussed in detail in the section below, the DEIR fails to comply with the foregoing requirements because there is no substantial evidence provided to conclude that certain impacts are insignificant with mitigation but this conclusion is stated multiple times. Additionally, there is a failure to provide thresholds of significance.

Accordingly, the DEIR fails to properly study, analyze, and mitigate the Project's biological resources impacts, despite the substantial evidence of potentially significant impacts, such that revision and recirculation of the DEIR is now required under CEQA.

B. The DEIR's Mitigation Measures Are Insufficient

A fundamental purpose of an EIR is to identify ways in which a proposed project's significant environmental impacts can be mitigated or avoided. Pub. Res. Code §§ 21002.1(a), 21061. To implement this statutory purpose, an EIR must describe any feasible mitigation measures that can minimize the project's significant environmental effects. PRC §§ 21002.1(a), 21100(b)(3); CEQA Guidelines §§ 15121(a), 15126.4(a).

If the project has a significant effect on the environment, the agency may approve the project only upon finding that it has "eliminated or substantially lessened all significant effects on the environment where feasible" PRC §§ 21002; 21002.1, 21081; CEQA Guidelines §§ 15091, 15092(b)(2)(A); and find that 'specific overriding economic, legal, social, technology or other benefits of the project outweigh the significant effects on the environment." PRC §§ 21002; 21002.1, 21081; CEQA Guidelines §§ 15091, 15092(b)(2)(B). "A gloomy forecast of environmental degradation is of little or no value without pragmatic, concrete means to minimize the impacts and restore ecological equilibrium." *Environmental Council of Sacramento v. City of Sacramento* (2006) 142 Cal.App.4th 1018, 1039.

9-F

CEQA mitigation measures proposed and adopted are required to describe what actions will be taken to reduce or avoid an environmental impact. (CEQA Guidelines § 15126.4(a)(1)(B) [providing "[f]ormulation of mitigation measures should not be deferred until some future time."].) While the same Guidelines section 15126.5(a)(1)(B) acknowledges an exception to the rule against deferrals, such exception is narrowly proscribed to situations where it is impractical or infeasible to include those details during the project's environmental review.

According to CEQA Guidelines, "[w]hen an EIR has been prepared for a project, the Responsible Agency shall not approve the project as proposed if the agency finds any feasible alternative or feasible mitigation measures within its powers that would substantially lessen or avoid any significant effect the project would have on the environment." CEQA Guidelines Section 15096(g)(2). 9-F

Moreover, CEQA forbids deferred mitigation. Guidelines § 15126.4(a)(1)(B). CEQA allows deferral of details of a mitigation measure only "when it is impractical or infeasible to include those details during the project's environmental review." (*Id.*) CEQA further requires: "that the agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard…" Guidelines § 15126.4(a)(1)(B). Deferring formulation of a Project's actual mitigation measures to some undefined time after the Project's approval is improper and cannot be used as a substitute for proper mitigation under CEQA. Impermissible deferral can occur when an EIR calls for mitigation measures to be created based on future studies or describes mitigation measures in general terms but the agency fails to commit itself to specific performance standards. (*Preserve Wild Santee v. City of Santee* (2012) 210 Cal.App.4th 260, 281 [city improperly deferred mitigation to butterfly habitat by failing to provide standards or guidelines for its management].)

As elaborated upon further below, there is a lack of critical details elaborating on mitigation measures and what Project issues they will address. There are no clear performance standards that must be met for the mitigation measures and as a result it is unclear how the success of mitigation measures is being quantified or can be quantified. Additionally, there is a failure to mitigate the Project's impacts in numerous areas to less than significant levels. These failures need to be addressed to ensure that the impacts are sufficiently analyzed and sufficient information is provided.

1. The DEIR Fails to Properly Mitigate the Project's Impacts to Biological Resources

The DEIR claims that all feasible mitigation measures have been evaluated and included, but this is not the case. In fact, 96 percent of the Biological Study Area (BSA) is disturbed/developed (DEIR pg. 4.4-12) by this Project, and therefore additional mitigation measures are necessary. Certain mitigation measures are unlawfully deferring providing details and thus fail to provide sufficient performance standards to ensure the Project is mitigating impacts. Additionally, the DEIR fails to consider all feasible mitigation measures for a significant and unmitigable impact, but at different points claims that the impacts are indeed significant and unmitigable, which means there is a gap of analysis because certain potential mitigation measures are not considered. Because there are large potential impacts, as discussed below, certain issues with the DEIR's approach to mitigation measures must be addressed. 9-G

Four plant and seventeen animal special status species will be potentially affected by the proposed Project (DEIR 4.4-22), and sufficient mitigation measures are not in place to ensure they are not unduly adversely impacted by the Project. These include the Crotch's bumble bee, Vernal pool fairy shrimp, Western spadefoot, Bakersfield legless lizard, California glossy snake, San Joaquin coachwhip, Blunt-nosed leopard lizard, Coast horned lizard, Tricolored blackbird, Burrowing owl, Swainson's hawk, Loggerhead shrike, San Joaquin antelope squirrel, Giant kangaroo rat, Tipton kangaroo rat, American badger, and San Joaquin kit fox, of which some are State candidates for listing as threatened, or are listed under the ESA, or are proposed for federal listing as a threatened species. Because these are such critical species and they will suffer impacts such as habitat loss, appropriate mitigation measures are necessary to ensure their preservation.

i. The DEIR Fails to Explain How the Project's Biological Mitigation Measures will Mitigate Impacts to a Less Than Significant Level.

The DEIR states that the mitigation measures 4.4-1-4.4-7, 4.4-18, 4.4-19, and 4.4-21 will reduce construction-related impacts on the Crotch's bumble bee to less than significant, but does not explain how the mitigation measures are sufficient to achieve this. Conclusory statements such as this are provided with insufficient evidence because the DEIR lists the mitigation measures and states that their implementation would reduce potential construction-related impacts to less than significant, but does 9-H

not explain how the impacts will be reduced (DEIR 4.4-66). The DEIR then states the following:

> Because Project construction would permanently remove suitable habitat for Crotch's bumble bee on Sites 1, 2, 3, 5, 6, and 8, and the gen-tie line route, it is unlikely that the Crotch's bumble bee would be flying/foraging during the operation and maintenance phase of the proposed Project. However, if individuals are using burrows on the site for nesting, significant direct impacts could occur from vehicle use, potentially causing the death or injury of adults, eggs, and larvae, as well as burrow collapse, nest abandonment, and reduced nesting success. Additionally, indirect impacts are possible from vehicle-related noise, ground vibration, emissions, and dust, which could disrupt the species. Indirect impacts could also result from the removal of vegetation during vegetation management activities. These direct and indirect operational impacts to Crotch's bumble bee are potentially significant, but would be reduced through implementation of the mitigation measures described above for construction activities. Therefore, implementation of these mitigation measures would reduce the potential operation and maintenance-related impacts to Crotch's bumble bee to less than significant.

9-H

(DEIR 4.4-66). Since it is not explained how the mitigation measures are sufficient to reduce these potentially large impacts, this must be further elaborated upon. An EIR must provide the reader with an analytic bridge between the evidence and findings. *Topanga Assn for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515. Additionally, a general description of a significant environmental impact is not sufficient; an EIR must make a reasonable effort to explain the nature and magnitude of the impact. *Sierra Club v. County of Fresno* (2018) 6 C5th 502, 519; *Cleveland Nat'l Forest Found. V. San Diego Ass'n of Gov'ts* (2017) 3 C5th 497, 514; *People ex rel Bonta v. County of Lake* (2024) 105 CA5th 1222, 1233–34; *Save Our Capitol! v. Department of Gen. Servs.* (2023) 87 CA5th 655, 695; *City of Long Beach v. City of Los Angeles* (2018) 19 CA5th 465, 486. The mitigation measures themselves do not elaborate on their sufficiency. This is an unsubstantiated leap in logic and is done for many of the special status species. For instance, MM 4.4-1 states that the lead biologist shall have the right to halt all activities that are in violation of special-status species protection measures, and work shall proceed only after hazards are removed and the species is no longer at

9-I

risk, but then goes on to state that even with the implementation of this mitigation measure and others, the cumulative impacts to special status species remains significant and unavoidable (DEIR 4.4-121). Thus, the mitigation measures provided are admitted to not mitigate cumulative impacts to a less than significant level. The DEIR states, in relevant part, the following:

> Joaquin Valley, the proposed Project, when combined with these projects, would contribute to an incremental cumulative loss of habitat for special-status species. While the proposed Project would have less than significant impacts on sensitive biological resources with the implementation of Mitigation Measures MM 4.4-1 through MM 4.4-25, and Mitigation Measure MM 4.1-4 (see Section 4.1, *Aesthetics and Visual Resources*) at the Project level, when combined with related development projects, cumulative impacts would be significant and unavoidable.

9-I

(DEIR 6-5). Though construction-related impacts may be mitigated, cumulative impacts are not sufficiently addressed. The DEIR must be revised to state clearly how the mitigation measures are sufficient to protect the special status species.

ii. The DEIR Fails to Adequately Assess the Cumulative Impacts on Biological Resources.

The DEIR must more adequately assess the cumulative impacts on biological resources, which are two or more effects that when considered together are considerable or compound or increase environmental impacts. The relevant code section (Cal. Code Regs. Tit. 14, § 15130 - Discussion of Cumulative Impacts) states the following:

> (b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact. The following elements are necessary to an adequate discussion of significant cumulative impacts:
>
> (1) Either:

9-J

> (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or
>
> (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

9-J

The DEIR vaguely mentions these two elements but does not provide sufficient detail or analysis regarding these elements for biological resources. The Project provides the other projects that would contribute to the cumulative impacts on biological resources (DEIR 3-118 – 3-123), but does not provide adequate projections regarding their cumulative effects and impacts. As such, cumulative impacts are not sufficiently assessed and addressed because the severity of the impacts and their likelihood of occurrence requires additional clarity and information.

iii. The DEIR Fails to Adequately Assess the Baseline Existing Environmental Conditions of Biological Resources on the Project Site.

Additionally, clear baseline metrics are not provided to compare the Project's potential impacts to and understand the full scope of impacts. The primary baseline discussed in the DEIR for biological impacts is a behavioral baseline (DEIR 1-64). There seems to be no population baseline or baseline for other impacts the Project may have. This needs to be corrected to ensure a clear analysis is provided to the public for comment. In the *Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 CA4th 99, 125 case, the Court held that the agency erred by failing to evaluate project's impacts against baseline of environmental conditions as they actually existed at beginning of EIR process. Though conditions may change over time, and in some instances may need to be considered over a range of time periods, the baseline still must be provided and assessed. Therefore, a baseline to measure Project impact against must be provided.

9-K

iv. The DEIR Unlawfully Defers Mitigation for the Project's Decommissioning Impacts.

The DEIR mentions that the project will be decommissioned after the lifespan of 35 years with regular maintenance intervals (DEIR 3-116). For most species mentioned, the DEIR claims that

> [b]ecause impacts during the decommissioning of the proposed Project are anticipated to be similar to those during the construction phase, mitigation measures described above for construction activities would also be implemented during decommissioning of the proposed Project. Therefore, impacts to [different special status species] would be reduced to less than significant during the decommissioning of the proposed Project.

(DEIR 4.4-68). There is little explanation as to why the impacts are anticipated to be similar and what the impacts will be exactly, thus additional explanation is required for this portion of the project. The unique impacts that decommissioning will have also need to be further assessed and discussed. 9-L

The Project's Biological Resources Mitigation Measures include, in relevant part,

> **MM 4.4-1:** Prior to the issuance of grading or building permits, and prior to decommissioning, the project operator shall retain a Lead Biologist(s) 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 species that may be affected by the construction, operation, and decommissioning of the project. The contact information for the Lead Biologist(s) shall be provided in writing to the Planning and Natural Resources Department.
>
> …
>
> **MM 4.4-2:** Prior to the issuance of grading or building permits, or decommissioning of the site, the Lead Biologist shall develop a Worker Environmental Awareness Training Program containing life history and identification information of special-status wildlife and plant species with potential to occur on site. The Worker Environmental Awareness Training Program shall review responsibilities for all on-site personnel including trash control, checking under and around vehicles and heavy

> equipment before starting, scanning for wildlife resources, contacting the Lead Biologist in the unanticipated instance of encountering special status wildlife species, and prohibition of pets and firearms. All on-site personnel shall be required to attend a worker environmental training. A sticker shall be placed on hard hats, indicating that the worker has completed the Worker Environmental Awareness Training. Copies of all prepared materials including, but not limited to, PowerPoint presentations, videos, information handouts and signed acknowledgement from each worker who has attended the required training shall be provided to the Planning and Natural Resources Department.

(DEIR 4.4-96 – 4.4-97.) The above mitigation measures, on their faces, defer the preparation of the required procedures for monitoring and halting/redirecting construction activities based on whether vague affects are had or not. WSRCC maintains that the postponement of the preparation of the substance of this mitigation measure, such as an in-depth Worker Environmental Awareness Training Program (WEATP), denies the public and the County's decisionmakers of the opportunity to assess the adequacy of the Project's biological resources mitigation and monitoring plan, and the Project's overall impact on biological resources with respect to ensuring such impacts are adequately mitigated and minimized. Indeed, because of this deferment, the County's decisionmakers have been denied the opportunity to fully consider the entire scope of the Project's potential impacts to biological resources and whether such impacts have been adequately mitigated, while the general public has also been denied the opportunity to assess and comment upon the associated impacts and the adequacy of the mitigation plans. Under CEQA, a project's mitigation measures are required to be ***mandatory and enforceable***, rather than optional and discretionary.

9-L

Additionally, MM 4.4-5 states in relevant part that:

> **MM 4.4-5:** Prior to initial ground disturbance, the applicant shall develop a plan to minimize the spread of invasive species and reduce dust that could spread invasive species. The plan shall be approved by the Kern County Planning and Natural Resources Department. The plan shall include methods and a plan to minimize introduction and spread of invasive and non-native plant species. The spread of invasive species and their seeds shall be avoided and controlled, through the use of watering

> or soil stabilizer(s) during construction. Watering and soil stabilizer(s) shall be used in areas under construction (i.e. active grading, trenching, etc.) or unpaved or nongravel roadways (dirt) being used to transport or move materials and machinery within the project site. In addition, construction entrances and exits shall be stabilized (using rip-rap and/or metal grates) to minimize off-site transport of materials that may contain invasive species or seeds

9-L

(DEIR 4.4-100). The Project's Mitigation Measure MM 4.4-5 improperly and unjustifiably defers preparation of the plan to address invasive species and the dust that could spread invasive species until after the Project has been approved by the County and shortly before construction is to commence. There is no valid explanation for the DEIR's failure to prepare and include this plan as part of the appendices for the Project's environmental review, thereby providing the County and the general public with a full and appropriate opportunity to assess the adequacy of the Project's mitigation plans in this regard. Because of this, the DEIR must be revised and recirculated to allow for sufficient review and comment on the plan and other proposed mitigation measures.

2. Lack of Proper Mitigation of Air Quality Impacts

i. The DEIR Fails to Sufficiently Address Significant Impacts.

The DEIR states that the cumulative air quality impacts from construction-related impacts are cumulatively significant and unavoidable. However, some of the impacts are not proven to be unavoidable but simply concluded to be so, and these impacts have other mitigation measures that can be utilized to reduce the impact. The conclusion of the impacts being unavoidable is therefore unsubstantiated and proper analysis and evidence should be provided.

9-M

The DEIR states that the San Joaquin Valley Air Pollution Control District is not in attainment for Ozone, PM10, and PM 2.5 (DEIR 4.3-9), with it being in severe nonattainment for state 1-hour ozone. These three pollutants are criteria pollutants according to the U.S. Environmental Protection Agency (EPA) under the Clean Air Act (CAA). Since the Project may increase the level of these three pollutants, as well as others, and the area is already not in attainment for criteria pollutants, more concrete steps need to be taken to address the risk of these pollutants from the proposed Project.

ii. The DEIR Fails to Explain How the Project's Air Quality Mitigation Measures Will Mitigate Certain Impacts to a Less Than Significant Level.

The mitigation measures provided to ensure compliance with applicable air quality plans do not seem to be sufficient to reduce impacts to being less than significant, but the DEIR claims that they are. In relevant part, the following mitigation measure does not sufficiently explain how it will fully mitigate criteria air pollutions but simply asserts that it will.

> **MM 4.3-4:** Prior to the issuance of grading permits, the Owner/Operator shall enter into a Developer Mitigation Agreement (DMA) with the San Joaquin Valley Air Pollution Control District. The **DMA is to fully mitigate** construction and operations criteria air emissions of project implementation for project vehicle and other mobile source emissions. The Owner/Operator shall pay fees to fully mitigate project emissions of NOx (oxides of nitrogen), ROG (reactive organic gases), PM10 (particulate matter of 10 microns or less in diameter), and PM 2.5 (particulate matter of 2.5 microns or less in diameter) (collectively referred to as "designated criteria emissions") to avoid any net increase in these pollutants. The air quality mitigation fee shall be paid prior to the approval of any construction or grading approval or payment plan as designated by the San Joaquin Valley Air Pollution Control District.

9-N

(DEIR MM 4.3-4). This is an unsubstantiated conclusion, and more study and details need to be provided to prove that the DMA will indeed fully mitigate construction and operations criteria air emissions, and how.

Additionally, the DEIR lists numerous impacts from construction and decommissioning but does not provide additional mitigation measures than the seven measures provided to comply with air quality plans and states the following in a conclusory manner.

> Level of Significance after Mitigation: Construction emissions generated by the proposed Project and related projects would cumulatively combine and result in a temporary significant and unavoidable cumulative impact. Cumulative operational impacts would be less than significant.

(DEIR 4.3-83). The conclusion of cumulative operational impacts being less than significant is not supported by the evidence presented and is therefore conclusory. Additional information and study are required to prove this is possible with the proposed mitigation measures.

The DEIR also states that

> [w]ith the implementation of Mitigation Measures MM 4.3-1 through MM 4.3-11, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact regarding air quality.

9-N

(DEIR 4.3-98). However, there is insufficient evidence to support this conclusion because how the mitigation measures prevent the Project from making a cumulatively considerable contribution is not elaborated upon. The DEIR lists numerous cumulative impacts but does not sufficiently state how these mitigation measures are adequate to address them. It is thus unclear how the conclusion that the implementation of the mitigation measures would prevent the Project from having a cumulatively considerable contribution to a significant cumulative impact on air quality is reached.

The DEIR also states that the level of significance after mitigation for construction emissions is as follows:

> Construction emissions generated by the proposed Project and related projects would cumulatively combine and result in a temporary significant and unavoidable cumulative impact. Cumulative operational impacts would be less than significant.

However, this too is insufficiently analyzed because it is unclear from the DEIR how this conclusion of being unavoidable is reached. How the mitigation measures will exactly address the potentially unavoidable cumulative impacts is not discussed and thus needs to be elaborated upon further.

As noted above, the DEIR fails to disclose information and the decision process adequately because though the risk of severe air quality impacts is high, there are not sufficient mitigation measures in place, and this lack of adequate mitigation is not explained or addressed.

The DEIR claims all reasonable and feasible mitigation measures have been evaluated and included, but this is not the case. Additional measures are required to address the hazards that will be present due to this Project.

Simply complying with applicable air quality plans does not mean there will not be large adverse impacts, and thus this also is insufficient to prove that the Project will have less than significant impacts.

9-N

3. Lack of Proper Mitigation of the Potential Impacts of Valley Fever

i. The DEIR Fails to Sufficiently Address the Harms of Valley Fever.

Valley Fever is a potentially lethal disease resulting from the inhalation of Coccidioides spores, a fungus commonly found in the southwestern United States. Valley Fever leads to the development of lesions in the lungs, with symptoms that include fever, chills, night sweats, chest pains, cough, appetite loss and muscle and joint aches. It can be lethal if the disease spreads beyond the lungs, as infection of a vital organ can lead to death.

The Project is located in a high-risk Valley Fever area. The area surrounding the Project is particularly susceptible to harboring the fungus that, when people are exposed to it, can lead to the development of Valley Fever. However, despite significant risks to workers and residents, the DEIR does not sufficiently consider and address the exposure risks.

Valley Fever is an extremely dangerous illness and more must be done to prevent its potential to spread due to the Project's impacts. MM 4.3-8 states in relevant part that

> Prior to issuance of grading permits and ground disturbance activities, the project proponent shall submit to the Kern County Public Health Services Department for review and approval a Valley Fever Dust Management Plan that addresses the potential presence of *Coccidioides immitis* spores and mitigates for the potential for *Coccidioidomycosis* (Valley Fever). The Plan shall include a program to evaluate the potential for exposure to Valley Fever from construction activities and to identify safety procedures that shall be implemented, as needed, to minimize personnel and public exposure to potential *Coccidioides immitis* spores…

9-O

(DEIR 4.3-90). This Valley Fever Dust Management Plan must be developed prior to the Project's commencement rather than being delayed until after the Project is approved. Though measures that should be incorporated in the Plan are provided in the DEIR, this is insufficient for the extent of threat Valley Fever poses because this has not been done yet and details are lacking. Given the high possibility of Valley Fever exposures on the Project site and the need to adopt additional mitigation measures to protect the health and safety of workers and residents, the DEIR should be revised and recirculated.

The South Coast Air Quality Management District (SCAQMD) Rule 403 applies to any activity capable of generating fugitive dust, which this Project is. Rule 403 requires the implementation of the best available dust control measures during active operations capable of generating fugitive dust, which include a Dust Control Plan, signage and fencing requirements and more. These mitigation measures, and other evidence-based ones, must be incorporated to better address the risk Valley Fever poses. 9-O

The DEIR defers critical information concerning mitigation measures, denying decision-makers and the public adequate information to evaluate the environmental risks of the Project. The DEIR should be revised and recirculated to analyze the environmental impacts of use of specific types of soil stabilizers and how they will be applied, as well as the Project's plans to minimize Valley Fever exposure for workers. The DEIR should be recirculated as "significant new information" in the DEIR is required to address concerns. (14 Cal. Code of Regs. § 15088.5.) "[N]ew significant environmental impact[s]" would occur based upon the soil stabilizers and application plan selected by the Project. (*Id.* § 15088.5(a)(1).) Moreover, inclusion of the Project's worker safety plans, which the DEIR defers development of, constitutes "mitigation measure[s] considerably different from others previously analyzed." (*Id.* § 15088.5(a)(3).) Revision and recirculation of the DEIR is required.

The DEIR fails to adequately analyze the baseline risk of exposure to Valley Fever. The DEIR should be revised and recirculated with an accurate environmental baseline for Valley Fever exposure risk so the threat the Project may pose is more understandable. Given that there are significant public health risks associated with Valley Fever, the Project's impact on air quality and public health must be more accurately disclosed and addressed.

ii. The DEIR Fails to Sufficiently Analyze the Impact of Certain Mitigation Measures.

The DEIR fails to adequately analyze the environmental impact of dust suppressants, despite dust suppressants playing a role in the Project's mitigation measures against Valley Fever exposure. MM 4.3-2 states in relevant part that

> Prior to issuance of any grading permit, the project proponent shall submit a Site Specific Dust Control Plan for review and approval by the Kern County Planning and Natural Resources Department. The Site-Specific Dust Control Plan shall serve to minimize fugitive dust emissions during project construction. The Site-Specific Dust Control Plan shall take into consideration grading and construction schedule, seasonal winds, site-specific wind patterns and soil conditions to ensure adequate measures are implemented to manage fugitive dust. The Site-Specific Dust Control Plan shall:
>
> a. Identify a comprehensive phased grading schedule for the entire project site. When feasible, grading activities shall be phased and minimized to those areas necessary for project access and installation of solar panels and other areas of infrastructure associated with the solar facility.
>
> b. The Site-Specific Dust Control Plan shall identify, in addition to those measures required by the air district, all measures 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. Pre-seeding and irrigating prior to construction to create vegetation with useful root structures.
>
> 4. Construction of dust screening in appropriate locations around the project site (i.e., fence slats or mesh screening).

9-P

5. 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.

(DEIR 4.3-66). The August 2019 County of Los Angeles Public Health "Coccidioidomycosis (Valley Fever) Management Plan: Guidelines for Employers" includes detailed recommendations for dust suppressants and other mitigation measures that can be incorporated into this Project to better address the risk Valley Fever poses. These include requirements to deal with Fugitive Dust, requirements for Dust Control Plans, Best Available Control Measures that are applicable to all construction activity sources and dust control measures for large operations.[9] The Dust Control Plan of the LA Management Plan states in relevant part the following: 9-P

A DCP shall contain all of the following information:

(i) Name(s), address(es), and phone number(s) of person(s) and owner(s)/operator(s) responsible for the preparation, submittal, and implementation of the DCP and responsible for the dust generating operation and the application of dust control measures.

(ii) A plot plan which shows the type and location of each project.

(iii) The total area of land surface to be disturbed, daily throughput volume of earthmoving in cubic yards, and total area in acres of the entire project site.

(iv) The expected start and completion dates of dust generating and soil disturbance activities to be performed on the site.

(v) The actual and potential sources of Fugitive Dust emissions on the site and the location of Bulk Material handling and storage areas, paved and Unpaved Roads; entrances and exits where carryout/Track-out may occur; and traffic areas.

(vi) Dust Suppressants to be applied, including: product specifications; manufacturer's usage instructions (method, frequency, and intensity of application); type, number, and capacity of application equipment; and

[9] http://publichealth.lacounty.gov/acd/docs/valleyfeverplan2019.pdf.

information on environmental impacts and approvals or certifications related to appropriate and safe use for ground application.

(vii) Specific surface treatment(s) and/or control measures utilized to control material carryout, Track-out, and sedimentation where unpaved and/or access points join paved public access roads.

(viii) Identify a dust control supervisor that:

(a) Is employed by or contracted with the property owner or developer;

(b) Is on the site or available on-site within 30 minutes during working hours;

(c) Has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with Rule requirements; and

(d) Has completed the AVAQMD Fugitive Dust Control Class and has been issued a valid Certification of Completion for the class.

9-P

Relevant aspects of this list of requirements for a DCP can be incorporated into the DCP for this Project that is to be submitted for review and approval by the Kern County Planning and Natural Resources Department. Some of these measures can be considered for application to this Project to better address Valley Fever.

More effective mitigation must be tailored specifically to addressing Valley Fever. The risk it poses is too great for effective mitigation measures not to be presented for review and comment.

4. Lack of Proper Mitigation for Conversion of Agricultural Land

The DEIR states that the conversion of important farmland is cumulatively significant and that there are unavoidable cumulative impacts on agricultural land. However, why these impacts are unavoidable and cannot be addressed with additional mitigation measures is insufficiently explained in the DEIR. Additionally, other mitigation measures may be able to address these impacts.

9-Q

i. The DEIR Fails to Evaluate and Consider Certain Reasonable and Feasible Mitigation Measures Regarding the Preservation of Agricultural Land.

The DEIR claims all reasonable and feasible mitigation measures have been evaluated and included, but this is not the case, as discussed below. The DEIR states the following:

> The proposed Project would be consistent with the applicable Scoping Plan Measures except for the Measure related to loss or conversion of natural and working lands. The Project site is active agricultural land and implementation of the proposed Project would result in conversion of that land. However, the conversion of agricultural land would support state and local renewable energy goals, produce reliable electricity, and promote economic and energy resiliency. Furthermore, if the proposed Project is decommissioned, the properties could resume agricultural production.

9-Q

(DEIR 4.8-44). The Project site cannot be used as agricultural land for the time in which it serves as a solar facility and can only be used as such after the Project is decommissioned. The conversion of agricultural land has a significant impact under CEQA and therefore additional mitigation measures should have been considered in greater detail, such as a conservation easement. The discussion surrounding conservation easements in the DEIR was cursory. The California Department of Conservation characterizes this mitigation measure as follows:

> The conversion of agricultural land represents a permanent reduction in the State's agricultural land resources. Conservation easements are an available mitigation tool and considered a standard practice in many areas of the State. As such, the Department advises the use of permanent agricultural conservation easements on land of at least equal quality and size as partial compensation for the direct loss of agricultural land. Conservation easements will protect a portion of those remaining land resources and lessen project impacts in accordance with CEQA Guidelines § 15370. The Department highlights this measure because of its acceptance and use by lead agencies.

The DEIR claims that a conservation easement is not required under Kern County's

General Plan and Zoning Codes, and that the agricultural conservation easement "would potentially conflict with KCGP policies regarding groundwater management." The DEIR then offers mitigation measures that do not address this issue and claims the impact on agricultural land is therefore significant and unavoidable. This issue is not sufficiently explained to entirely dismiss of a conservation easement mitigation measure. Other reasonable mitigation measures are also not considered sufficiently. Thus, additional mitigation measures are necessary to address the conversion of agricultural land.

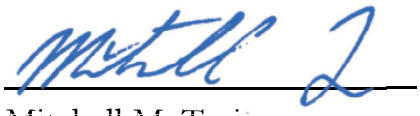
9-Q

V. CONCLUSION

Based on the foregoing concerns, the County should require revision and recirculation of the DEIR for the Project pursuant to CEQA. Absent doing so, the DEIR in its current form directly violates CEQA in multiple respects. If the County should have any questions or concerns, please do not hesitate to contact this office.

Sincerely,

9-R



Mitchell M. Tsai
Attorneys for Western States Regional Council of Carpenters

Attached:

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling (Exhibit A);

Air Quality and GHG Expert Paul Rosenfeld CV (Exhibit B); and

Air Quality and GHG Expert Matt Hagemann CV (Exhibit C).

EXHIBIT A

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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March 8, 2021

Mitchell M. Tsai
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Subject: Local Hire Requirements and Considerations for Greenhouse Gas Modeling

Dear Mr. Tsai,

Soil Water Air Protection Enterprise ("SWAPE") is pleased to provide the following draft technical report explaining the significance of worker trips required for construction of land use development projects with respect to the estimation of greenhouse gas ("GHG") emissions. The report will also discuss the potential for local hire requirements to reduce the length of worker trips, and consequently, reduced or mitigate the potential GHG impacts.

Worker Trips and Greenhouse Gas Calculations

The California Emissions Estimator Model ("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 pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects."[1] CalEEMod quantifies construction-related emissions associated with land use projects resulting from off-road construction equipment; on-road mobile equipment associated with workers, vendors, and hauling; fugitive dust associated with grading, demolition, truck loading, and on-road vehicles traveling along paved and unpaved roads; and architectural coating activities; and paving.[2]

The number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.[3]

[1] "California Emissions Estimator Model." CAPCOA, 2017, *available at:* http://www.aqmd.gov/caleemod/home.
[2] "California Emissions Estimator Model." CAPCOA, 2017, *available at:* http://www.aqmd.gov/caleemod/home.
[3] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

Specifically, the number and length of vehicle trips is utilized to estimate the vehicle miles travelled ("VMT") associated with construction. Then, utilizing vehicle-class specific EMFAC 2014 emission factors, CalEEMod calculates the vehicle exhaust, evaporative, and dust emissions resulting from construction-related VMT, including personal vehicles for worker commuting.[4]

Specifically, in order to calculate VMT, CalEEMod multiplies the average daily trip rate by the average overall trip length (see excerpt below):

> "$VMT_d = \Sigma(\text{Average Daily Trip Rate}_i * \text{Average Overall Trip Length}_i)_n$
>
> Where:
>
> n = Number of land uses being modeled."[5]

Furthermore, to calculate the on-road emissions associated with worker trips, CalEEMod utilizes the following equation (see excerpt below):

> "$\text{Emissions}_{pollutant} = VMT * EF_{running,pollutant}$
>
> Where:
>
> $\text{Emissions}_{pollutant}$ = emissions from vehicle running for each pollutant
>
> VMT = vehicle miles traveled
>
> $EF_{running,pollutant}$ = emission factor for running emissions."[6]

Thus, there is a direct relationship between trip length and VMT, as well as a direct relationship between VMT and vehicle running emissions. In other words, when the trip length is increased, the VMT and vehicle running emissions increase as a result. Thus, vehicle running emissions can be reduced by decreasing the average overall trip length, by way of a local hire requirement or otherwise.

Default Worker Trip Parameters and Potential Local Hire Requirements

As previously discussed, the number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.[7] In order to understand how local hire requirements and associated worker trip length reductions impact GHG emissions calculations, it is important to consider the CalEEMod default worker trip parameters. CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence.[8] The default number of construction-related worker trips is calculated by multiplying the

[4] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14-15.
[5] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 23.
[6] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.
[7] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.
[8] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 1, 9.

number of pieces of equipment for all phases by 1.25, with the exception of worker trips required for the building construction and architectural coating phases.[9] Furthermore, the worker trip vehicle class is a 50/25/25 percent mix of light duty autos, light duty truck class 1 and light duty truck class 2, respectively."[10] Finally, the default worker trip length is consistent with the length of the operational home-to-work vehicle trips.[11] The operational home-to-work vehicle trip lengths are:

> "[B]ased on the *location* and *urbanization* selected on the project characteristic screen. These values were *supplied by the air districts or use a default average for the state*. Each district (or county) also assigns trip lengths for urban and rural settings" (emphasis added). [12]

Thus, the default worker trip length is based on the location and urbanization level selected by the User when modeling emissions. The below table shows the CalEEMod default rural and urban worker trip lengths by air basin (see excerpt below and Attachment A).[13]

Worker Trip Length by Air Basin		
Air Basin	**Rural (miles)**	**Urban (miles)**
Great Basin Valleys	16.8	10.8
Lake County	16.8	10.8
Lake Tahoe	16.8	10.8
Mojave Desert	16.8	10.8
Mountain Counties	16.8	10.8
North Central Coast	17.1	12.3
North Coast	16.8	10.8
Northeast Plateau	16.8	10.8
Sacramento Valley	16.8	10.8
Salton Sea	14.6	11
San Diego	16.8	10.8
San Francisco Bay Area	10.8	10.8
San Joaquin Valley	16.8	10.8
South Central Coast	16.8	10.8
South Coast	19.8	14.7
Average	**16.47**	**11.17**
Minimum	**10.80**	**10.80**
Maximum	**19.80**	**14.70**
Range	**9.00**	**3.90**

[9] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.
[10] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.
[11] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14.
[12] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 21.
[13] "Appendix D Default Data Tables." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-84 – D-86.

As demonstrated above, default rural worker trip lengths for air basins in California vary from 10.8- to 19.8-miles, with an average of 16.47 miles. Furthermore, default urban worker trip lengths vary from 10.8- to 14.7-miles, with an average of 11.17 miles. Thus, while default worker trip lengths vary by location, default urban worker trip lengths tend to be shorter in length. Based on these trends evident in the CalEEMod default worker trip lengths, we can reasonably assume that the efficacy of a local hire requirement is especially dependent upon the urbanization of the project site, as well as the project location.

Practical Application of a Local Hire Requirement and Associated Impact

To provide an example of the potential impact of a local hire provision on construction-related GHG emissions, we estimated the significance of a local hire provision for the Village South Specific Plan ("Project") located in the City of Claremont ("City"). The Project proposed to construct 1,000 residential units, 100,000-SF of retail space, 45,000-SF of office space, as well as a 50-room hotel, on the 24-acre site. The Project location is classified as Urban and lies within the Los Angeles-South Coast County. As a result, the Project has a default worker trip length of 14.7 miles.[14] In an effort to evaluate the potential for a local hire provision to reduce the Project's construction-related GHG emissions, we prepared an updated model, reducing all worker trip lengths to 10 miles (see Attachment B). Our analysis estimates that if a local hire provision with a 10-mile radius were to be implemented, the GHG emissions associated with Project construction would decrease by approximately 17% (see table below and Attachment C).

Local Hire Provision Net Change	
Without Local Hire Provision	
Total Construction GHG Emissions (MT CO_2e)	3,623
Amortized Construction GHG Emissions (MT CO_2e/year)	120.77
With Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,024
Amortized Construction GHG Emissions (MT CO_2e/year)	100.80
% Decrease in Construction-related GHG Emissions	***17%***

As demonstrated above, by implementing a local hire provision requiring 10 mile worker trip lengths, the Project could reduce potential GHG emissions associated with construction worker trips. More broadly, any local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

This serves as an example of the potential impacts of local hire requirements on estimated project-level GHG emissions, though it does not indicate that local hire requirements would result in reduced construction-related GHG emission for all projects. As previously described, the significance of a local hire requirement depends on the worker trip length enforced and the default worker trip length for the project's urbanization level and location.

[14] "Appendix D Default Data Tables." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-85.

Disclaimer

SWAPE has received limited discovery. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,



Matt Hagemann, P.G., C.Hg.



Paul E. Rosenfeld, Ph.D.

Location Type	Location Name	Rural H-W (miles)	Urban H-W (miles)
Air Basin	Great Basin	16.8	10.8
Air Basin	Lake County	16.8	10.8
Air Basin	Lake Tahoe	16.8	10.8
Air Basin	Mojave Desert	16.8	10.8
Air Basin	Mountain	16.8	10.8
Air Basin	North Central	17.1	12.3
Air Basin	North Coast	16.8	10.8
Air Basin	Northeast	16.8	10.8
Air Basin	Sacramento	16.8	10.8
Air Basin	Salton Sea	14.6	11
Air Basin	San Diego	16.8	10.8
Air Basin	San Francisco	10.8	10.8
Air Basin	San Joaquin	16.8	10.8
Air Basin	South Central	16.8	10.8
Air Basin	South Coast	19.8	14.7
Air District	Amador County	16.8	10.8
Air District	Antelope Valley	16.8	10.8
Air District	Bay Area AQMD	10.8	10.8
Air District	Butte County	12.54	12.54
Air District	Calaveras	16.8	10.8
Air District	Colusa County	16.8	10.8
Air District	El Dorado	16.8	10.8
Air District	Feather River	16.8	10.8
Air District	Glenn County	16.8	10.8
Air District	Great Basin	16.8	10.8
Air District	Imperial County	10.2	7.3
Air District	Kern County	16.8	10.8
Air District	Lake County	16.8	10.8
Air District	Lassen County	16.8	10.8
Air District	Mariposa	16.8	10.8
Air District	Mendocino	16.8	10.8
Air District	Modoc County	16.8	10.8
Air District	Mojave Desert	16.8	10.8
Air District	Monterey Bay	16.8	10.8
Air District	North Coast	16.8	10.8
Air District	Northern Sierra	16.8	10.8
Air District	Northern	16.8	10.8
Air District	Placer County	16.8	10.8
Air District	Sacramento	15	10

Air District	San Diego	16.8	10.8
Air District	San Joaquin	16.8	10.8
Air District	San Luis Obispo	13	13
Air District	Santa Barbara	8.3	8.3
Air District	Shasta County	16.8	10.8
Air District	Siskiyou County	16.8	10.8
Air District	South Coast	19.8	14.7
Air District	Tehama County	16.8	10.8
Air District	Tuolumne	16.8	10.8
Air District	Ventura County	16.8	10.8
Air District	Yolo/Solano	15	10
County	Alameda	10.8	10.8
County	Alpine	16.8	10.8
County	Amador	16.8	10.8
County	Butte	12.54	12.54
County	Calaveras	16.8	10.8
County	Colusa	16.8	10.8
County	Contra Costa	10.8	10.8
County	Del Norte	16.8	10.8
County	El Dorado-Lake	16.8	10.8
County	El Dorado-	16.8	10.8
County	Fresno	16.8	10.8
County	Glenn	16.8	10.8
County	Humboldt	16.8	10.8
County	Imperial	10.2	7.3
County	Inyo	16.8	10.8
County	Kern-Mojave	16.8	10.8
County	Kern-San	16.8	10.8
County	Kings	16.8	10.8
County	Lake	16.8	10.8
County	Lassen	16.8	10.8
County	Los Angeles-	16.8	10.8
County	Los Angeles-	19.8	14.7
County	Madera	16.8	10.8
County	Marin	10.8	10.8
County	Mariposa	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Merced	16.8	10.8
County	Modoc	16.8	10.8
County	Mono	16.8	10.8
County	Monterey	16.8	10.8
County	Napa	10.8	10.8

County	Nevada	16.8	10.8
County	Orange	19.8	14.7
County	Placer-Lake	16.8	10.8
County	Placer-Mountain	16.8	10.8
County	Placer-	16.8	10.8
County	Plumas	16.8	10.8
County	Riverside-	16.8	10.8
County	Riverside-	19.8	14.7
County	Riverside-Salton	14.6	11
County	Riverside-South	19.8	14.7
County	Sacramento	15	10
County	San Benito	16.8	10.8
County	San Bernardino-	16.8	10.8
County	San Bernardino-	19.8	14.7
County	San Diego	16.8	10.8
County	San Francisco	10.8	10.8
County	San Joaquin	16.8	10.8
County	San Luis Obispo	13	13
County	San Mateo	10.8	10.8
County	Santa Barbara-	8.3	8.3
County	Santa Barbara-	8.3	8.3
County	Santa Clara	10.8	10.8
County	Santa Cruz	16.8	10.8
County	Shasta	16.8	10.8
County	Sierra	16.8	10.8
County	Siskiyou	16.8	10.8
County	Solano-	15	10
County	Solano-San	16.8	10.8
County	Sonoma-North	16.8	10.8
County	Sonoma-San	10.8	10.8
County	Stanislaus	16.8	10.8
County	Sutter	16.8	10.8
County	Tehama	16.8	10.8
County	Trinity	16.8	10.8
County	Tulare	16.8	10.8
County	Tuolumne	16.8	10.8
County	Ventura	16.8	10.8
County	Yolo	15	10
County	Yuba	16.8	10.8
Statewide	Statewide	16.8	10.8

Worker Trip Length by Air Basin		
Air Basin	**Rural (miles)**	**Urban (miles)**
Great Basin Valleys	16.8	10.8
Lake County	16.8	10.8
Lake Tahoe	16.8	10.8
Mojave Desert	16.8	10.8
Mountain Counties	16.8	10.8
North Central Coast	17.1	12.3
North Coast	16.8	10.8
Northeast Plateau	16.8	10.8
Sacramento Valley	16.8	10.8
Salton Sea	14.6	11
San Diego	16.8	10.8
San Francisco Bay Area	10.8	10.8
San Joaquin Valley	16.8	10.8
South Central Coast	16.8	10.8
South Coast	19.8	14.7
Average	**16.47**	**11.17**
Mininum	**10.80**	**10.80**
Maximum	**19.80**	**14.70**
Range	**9.00**	**3.90**

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1713	1.8242	1.1662	2.4000e-003	0.4169	0.0817	0.4986	0.1795	0.0754	0.2549	0.0000	213.1969	213.1969	0.0601	0.0000	214.6993
2022	0.6904	4.1142	6.1625	0.0189	1.3058	0.1201	1.4259	0.3460	0.1128	0.4588	0.0000	1,721.6826	1,721.6826	0.1294	0.0000	1,724.9187
2023	0.6148	3.3649	5.6747	0.0178	1.1963	0.0996	1.2959	0.3203	0.0935	0.4138	0.0000	1,627.5295	1,627.5295	0.1185	0.0000	1,630.4925
2024	4.1619	0.1335	0.2810	5.9000e-004	0.0325	6.4700e-003	0.0390	8.6300e-003	6.0400e-003	0.0147	0.0000	52.9078	52.9078	8.0200e-003	0.0000	53.1082
Maximum	**4.1619**	**4.1142**	**6.1625**	**0.0189**	**1.3058**	**0.1201**	**1.4259**	**0.3460**	**0.1128**	**0.4588**	**0.0000**	**1,721.6826**	**1,721.6826**	**0.1294**	**0.0000**	**1,724.9187**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1713	1.8242	1.1662	2.4000e-003	0.4169	0.0817	0.4986	0.1795	0.0754	0.2549	0.0000	213.1967	213.1967	0.0601	0.0000	214.6991
2022	0.6904	4.1142	6.1625	0.0189	1.3058	0.1201	1.4259	0.3460	0.1128	0.4588	0.0000	1,721.6823	1,721.6823	0.1294	0.0000	1,724.9183
2023	0.6148	3.3648	5.6747	0.0178	1.1963	0.0996	1.2959	0.3203	0.0935	0.4138	0.0000	1,627.5291	1,627.5291	0.1185	0.0000	1,630.4921
2024	4.1619	0.1335	0.2810	5.9000e-004	0.0325	6.4700e-003	0.0390	8.6300e-003	6.0400e-003	0.0147	0.0000	52.9077	52.9077	8.0200e-003	0.0000	53.1082
Maximum	**4.1619**	**4.1142**	**6.1625**	**0.0189**	**1.3058**	**0.1201**	**1.4259**	**0.3460**	**0.1128**	**0.4588**	**0.0000**	**1,721.6823**	**1,721.6823**	**0.1294**	**0.0000**	**1,724.9183**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2021	11-30-2021	1.4103	1.4103
2	12-1-2021	2-28-2022	1.3613	1.3613
3	3-1-2022	5-31-2022	1.1985	1.1985
4	6-1-2022	8-31-2022	1.1921	1.1921
5	9-1-2022	11-30-2022	1.1918	1.1918
6	12-1-2022	2-28-2023	1.0774	1.0774
7	3-1-2023	5-31-2023	1.0320	1.0320
8	6-1-2023	8-31-2023	1.0260	1.0260

9	**9-1-2023**	**11-30-2023**	1.0265	1.0265
10	**12-1-2023**	**2-29-2024**	2.8857	2.8857
11	**3-1-2024**	**5-31-2024**	1.6207	1.6207
		Highest	2.8857	2.8857

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0012**	**51.0012**	**0.0144**	**0.0000**	**51.3601**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.7000e-004	7.5000e-004	8.5100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2251	2.2251	7.0000e-005	0.0000	2.2267
Total	**2.9000e-003**	**0.0641**	**0.0233**	**2.0000e-004**	**6.4100e-003**	**2.1000e-004**	**6.6200e-003**	**1.7300e-003**	**2.0000e-004**	**1.9300e-003**	**0.0000**	**19.6816**	**19.6816**	**1.2800e-003**	**0.0000**	**19.7136**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0011**	**51.0011**	**0.0144**	**0.0000**	**51.3600**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.7000e-004	7.5000e-004	8.5100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2251	2.2251	7.0000e-005	0.0000	2.2267
Total	**2.9000e-003**	**0.0641**	**0.0233**	**2.0000e-004**	**6.4100e-003**	**2.1000e-004**	**6.6200e-003**	**1.7300e-003**	**2.0000e-004**	**1.9300e-003**	**0.0000**	**19.6816**	**19.6816**	**1.2800e-003**	**0.0000**	**19.7136**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7061**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814
Total	**7.7000e-004**	**6.0000e-004**	**6.8100e-003**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7801**	**1.7801**	**5.0000e-005**	**0.0000**	**1.7814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7060**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814
Total	**7.7000e-004**	**6.0000e-004**	**6.8100e-003**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7801**	**1.7801**	**5.0000e-005**	**0.0000**	**1.7814**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5405	103.5405	0.0335	0.0000	104.3776
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5405**	**103.5405**	**0.0335**	**0.0000**	**104.3776**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6400e-003	1.2700e-003	0.0144	4.0000e-005	4.1600e-003	3.0000e-005	4.2000e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7579	3.7579	1.1000e-004	0.0000	3.7607
Total	**1.6400e-003**	**1.2700e-003**	**0.0144**	**4.0000e-005**	**4.1600e-003**	**3.0000e-005**	**4.2000e-003**	**1.1100e-003**	**3.0000e-005**	**1.1400e-003**	**0.0000**	**3.7579**	**3.7579**	**1.1000e-004**	**0.0000**	**3.7607**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5403	103.5403	0.0335	0.0000	104.3775
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5403**	**103.5403**	**0.0335**	**0.0000**	**104.3775**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6400e-003	1.2700e-003	0.0144	4.0000e-005	4.1600e-003	3.0000e-005	4.2000e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7579	3.7579	1.1000e-004	0.0000	3.7607
Total	**1.6400e-003**	**1.2700e-003**	**0.0144**	**4.0000e-005**	**4.1600e-003**	**3.0000e-005**	**4.2000e-003**	**1.1100e-003**	**3.0000e-005**	**1.1400e-003**	**0.0000**	**3.7579**	**3.7579**	**1.1000e-004**	**0.0000**	**3.7607**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684
Total	**2.8000e-004**	**2.1000e-004**	**2.4400e-003**	**1.0000e-005**	**7.7000e-004**	**1.0000e-005**	**7.7000e-004**	**2.0000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**0.6679**	**0.6679**	**2.0000e-005**	**0.0000**	**0.6684**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684
Total	**2.8000e-004**	**2.1000e-004**	**2.4400e-003**	**1.0000e-005**	**7.7000e-004**	**1.0000e-005**	**7.7000e-004**	**2.0000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**0.6679**	**0.6679**	**2.0000e-005**	**0.0000**	**0.6684**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1324	293.1324	0.0702	0.0000	294.8881
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1324**	**293.1324**	**0.0702**	**0.0000**	**294.8881**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.4088	0.3066	3.5305	0.0107	1.1103	8.8700e-003	1.1192	0.2949	8.1700e-003	0.3031	0.0000	966.8117	966.8117	0.0266	0.0000	967.4773
Total	**0.4616**	**2.0027**	**3.9885**	**0.0152**	**1.2243**	**0.0121**	**1.2363**	**0.3278**	**0.0112**	**0.3390**	**0.0000**	**1,408.7952**	**1,408.7952**	**0.0530**	**0.0000**	**1,410.1208**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1321	293.1321	0.0702	0.0000	294.8877
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1321**	**293.1321**	**0.0702**	**0.0000**	**294.8877**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.4088	0.3066	3.5305	0.0107	1.1103	8.8700e-003	1.1192	0.2949	8.1700e-003	0.3031	0.0000	966.8117	966.8117	0.0266	0.0000	967.4773
Total	**0.4616**	**2.0027**	**3.9885**	**0.0152**	**1.2243**	**0.0121**	**1.2363**	**0.3278**	**0.0112**	**0.3390**	**0.0000**	**1,408.7952**	**1,408.7952**	**0.0530**	**0.0000**	**1,410.1208**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2789	286.2789	0.0681	0.0000	287.9814
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2789**	**286.2789**	**0.0681**	**0.0000**	**287.9814**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.3753	0.2708	3.1696	0.0101	1.0840	8.4100e-003	1.0924	0.2879	7.7400e-003	0.2957	0.0000	909.3439	909.3439	0.0234	0.0000	909.9291
Total	**0.4135**	**1.5218**	**3.5707**	**0.0144**	**1.1953**	**9.8700e-003**	**1.2051**	**0.3200**	**9.1400e-003**	**0.3292**	**0.0000**	**1,327.3369**	**1,327.3369**	**0.0462**	**0.0000**	**1,328.4916**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2785	286.2785	0.0681	0.0000	287.9811
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2785**	**286.2785**	**0.0681**	**0.0000**	**287.9811**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.3753	0.2708	3.1696	0.0101	1.0840	8.4100e-003	1.0924	0.2879	7.7400e-003	0.2957	0.0000	909.3439	909.3439	0.0234	0.0000	909.9291
Total	**0.4135**	**1.5218**	**3.5707**	**0.0144**	**1.1953**	**9.8700e-003**	**1.2051**	**0.3200**	**9.1400e-003**	**0.3292**	**0.0000**	**1,327.3369**	**1,327.3369**	**0.0462**	**0.0000**	**1,328.4916**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.7000e-004	3.1200e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8963	0.8963	2.0000e-005	0.0000	0.8968
Total	**3.7000e-004**	**2.7000e-004**	**3.1200e-003**	**1.0000e-005**	**1.0700e-003**	**1.0000e-005**	**1.0800e-003**	**2.8000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8963**	**0.8963**	**2.0000e-005**	**0.0000**	**0.8968**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.7000e-004	3.1200e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8963	0.8963	2.0000e-005	0.0000	0.8968
Total	**3.7000e-004**	**2.7000e-004**	**3.1200e-003**	**1.0000e-005**	**1.0700e-003**	**1.0000e-005**	**1.0800e-003**	**2.8000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8963**	**0.8963**	**2.0000e-005**	**0.0000**	**0.8968**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.1000e-004	4.9200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4697	1.4697	4.0000e-005	0.0000	1.4706
Total	**5.9000e-004**	**4.1000e-004**	**4.9200e-003**	**2.0000e-005**	**1.8100e-003**	**1.0000e-005**	**1.8200e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4697**	**1.4697**	**4.0000e-005**	**0.0000**	**1.4706**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.1000e-004	4.9200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4697	1.4697	4.0000e-005	0.0000	1.4706
Total	**5.9000e-004**	**4.1000e-004**	**4.9200e-003**	**2.0000e-005**	**1.8100e-003**	**1.0000e-005**	**1.8200e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4697**	**1.4697**	**4.0000e-005**	**0.0000**	**1.4706**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	6.9900e-003	0.0835	2.8000e-004	0.0307	2.3000e-004	0.0309	8.1500e-003	2.2000e-004	8.3700e-003	0.0000	24.9407	24.9407	6.1000e-004	0.0000	24.9558
Total	**0.0101**	**6.9900e-003**	**0.0835**	**2.8000e-004**	**0.0307**	**2.3000e-004**	**0.0309**	**8.1500e-003**	**2.2000e-004**	**8.3700e-003**	**0.0000**	**24.9407**	**24.9407**	**6.1000e-004**	**0.0000**	**24.9558**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	6.9900e-003	0.0835	2.8000e-004	0.0307	2.3000e-004	0.0309	8.1500e-003	2.2000e-004	8.3700e-003	0.0000	24.9407	24.9407	6.1000e-004	0.0000	24.9558
Total	**0.0101**	**6.9900e-003**	**0.0835**	**2.8000e-004**	**0.0307**	**2.3000e-004**	**0.0309**	**8.1500e-003**	**2.2000e-004**	**8.3700e-003**	**0.0000**	**24.9407**	**24.9407**	**6.1000e-004**	**0.0000**	**24.9558**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Unmitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
NaturalGas Mitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478
NaturalGas Unmitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Unmitigated	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

7.0 Water Detail

7.1 Mitigation Measures Water

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	585.8052	3.0183	0.0755	683.7567
Unmitigated	585.8052	3.0183	0.0755	683.7567

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	207.8079	12.2811	0.0000	514.8354
Unmitigated	207.8079	12.2811	0.0000	514.8354

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2769	46.4588	31.6840	0.0643	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,234.7974	6,234.7974	1.9495	0.0000	6,283.5352
2022	5.3304	38.8967	49.5629	0.1517	9.8688	1.6366	10.7727	3.6558	1.5057	5.1615	0.0000	15,251.5674	15,251.5674	1.9503	0.0000	15,278.5288
2023	4.8957	26.3317	46.7567	0.1472	9.8688	0.7794	10.6482	2.6381	0.7322	3.3702	0.0000	14,807.5269	14,807.5269	1.0250	0.0000	14,833.1521
2024	237.1630	9.5575	15.1043	0.0244	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,361.3989	2,361.3989	0.7177	0.0000	2,379.3421
Maximum	**237.1630**	**46.4588**	**49.5629**	**0.1517**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**15,251.5674**	**15,251.5674**	**1.9503**	**0.0000**	**15,278.5288**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2769	46.4588	31.6840	0.0643	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,234.7974	6,234.7974	1.9495	0.0000	6,283.5352
2022	5.3304	38.8967	49.5629	0.1517	9.8688	1.6366	10.7727	3.6558	1.5057	5.1615	0.0000	15,251.5674	15,251.5674	1.9503	0.0000	15,278.5288
2023	4.8957	26.3317	46.7567	0.1472	9.8688	0.7794	10.6482	2.6381	0.7322	3.3702	0.0000	14,807.5269	14,807.5269	1.0250	0.0000	14,833.1520
2024	237.1630	9.5575	15.1043	0.0244	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,361.3989	2,361.3989	0.7177	0.0000	2,379.3421
Maximum	**237.1630**	**46.4588**	**49.5629**	**0.1517**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**15,251.5674**	**15,251.5674**	**1.9503**	**0.0000**	**15,278.5288**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.2413	1,292.2413	0.0877		1,294.4337
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413
Total	**0.1916**	**4.1394**	**1.5644**	**0.0136**	**0.4346**	**0.0139**	**0.4485**	**0.1176**	**0.0133**	**0.1309**		**1,463.0568**	**1,463.0568**	**0.0927**		**1,465.3750**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.2413	1,292.2413	0.0877		1,294.4337
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413
Total	**0.1916**	**4.1394**	**1.5644**	**0.0136**	**0.4346**	**0.0139**	**0.4485**	**0.1176**	**0.0133**	**0.1309**		**1,463.0568**	**1,463.0568**	**0.0927**		**1,465.3750**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		204.9786	204.9786	6.0400e-003		205.1296
Total	**0.0772**	**0.0530**	**0.7250**	**2.0600e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**204.9786**	**204.9786**	**6.0400e-003**		**205.1296**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		204.9786	204.9786	6.0400e-003		205.1296
Total	**0.0772**	**0.0530**	**0.7250**	**2.0600e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**204.9786**	**204.9786**	**6.0400e-003**		**205.1296**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.0857**	**0.0589**	**0.8056**	**2.2900e-003**	**0.2236**	**1.8100e-003**	**0.2254**	**0.0593**	**1.6600e-003**	**0.0610**		**227.7540**	**227.7540**	**6.7100e-003**		**227.9217**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.0857**	**0.0589**	**0.8056**	**2.2900e-003**	**0.2236**	**1.8100e-003**	**0.2254**	**0.0593**	**1.6600e-003**	**0.0610**		**227.7540**	**227.7540**	**6.7100e-003**		**227.9217**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**0.0803**	**0.0532**	**0.7432**	**2.2100e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6100e-003**	**0.0609**		**219.7425**	**219.7425**	**6.0600e-003**		**219.8941**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**0.0803**	**0.0532**	**0.7432**	**2.2100e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6100e-003**	**0.0609**		**219.7425**	**219.7425**	**6.0600e-003**		**219.8941**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.5482	3,896.5482	0.2236		3,902.1384
Worker	3.2162	2.1318	29.7654	0.0883	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,800.6857	8,800.6857	0.2429		8,806.7582
Total	**3.6242**	**15.3350**	**33.1995**	**0.1247**	**9.8688**	**0.0949**	**9.9637**	**2.6381**	**0.0883**	**2.7263**		**12,697.2339**	**12,697.2339**	**0.4665**		**12,708.8966**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.5482	3,896.5482	0.2236		3,902.1384
Worker	3.2162	2.1318	29.7654	0.0883	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,800.6857	8,800.6857	0.2429		8,806.7582
Total	**3.6242**	**15.3350**	**33.1995**	**0.1247**	**9.8688**	**0.0949**	**9.9637**	**2.6381**	**0.0883**	**2.7263**		**12,697.2339**	**12,697.2339**	**0.4665**		**12,708.8966**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	3.0203	1.9287	27.4113	0.0851	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		8,478.4408	8,478.4408	0.2190		8,483.9160
Total	**3.3229**	**11.9468**	**30.5127**	**0.1203**	**9.8688**	**0.0797**	**9.9485**	**2.6381**	**0.0738**	**2.7118**		**12,252.3170**	**12,252.3170**	**0.4172**		**12,262.7460**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	3.0203	1.9287	27.4113	0.0851	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		8,478.4408	8,478.4408	0.2190		8,483.9160
Total	**3.3229**	**11.9468**	**30.5127**	**0.1203**	**9.8688**	**0.0797**	**9.9485**	**2.6381**	**0.0738**	**2.7118**		**12,252.3170**	**12,252.3170**	**0.4172**		**12,262.7460**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
Total	**0.0566**	**0.0361**	**0.5133**	**1.5900e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**158.7723**	**158.7723**	**4.1000e-003**		**158.8748**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
Total	**0.0566**	**0.0361**	**0.5133**	**1.5900e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**158.7723**	**158.7723**	**4.1000e-003**		**158.8748**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0535	0.0329	0.4785	1.5400e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		153.8517	153.8517	3.7600e-003		153.9458
Total	**0.0535**	**0.0329**	**0.4785**	**1.5400e-003**	**0.1677**	**1.2600e-003**	**0.1689**	**0.0445**	**1.1600e-003**	**0.0456**		**153.8517**	**153.8517**	**3.7600e-003**		**153.9458**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0535	0.0329	0.4785	1.5400e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		153.8517	153.8517	3.7600e-003		153.9458
Total	**0.0535**	**0.0329**	**0.4785**	**1.5400e-003**	**0.1677**	**1.2600e-003**	**0.1689**	**0.0445**	**1.1600e-003**	**0.0456**		**153.8517**	**153.8517**	**3.7600e-003**		**153.9458**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5707	0.3513	5.1044	0.0165	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,641.0852	1,641.0852	0.0401		1,642.0886
Total	**0.5707**	**0.3513**	**5.1044**	**0.0165**	**1.7884**	**0.0134**	**1.8018**	**0.4743**	**0.0123**	**0.4866**		**1,641.0852**	**1,641.0852**	**0.0401**		**1,642.0886**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5707	0.3513	5.1044	0.0165	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,641.0852	1,641.0852	0.0401		1,642.0886
Total	**0.5707**	**0.3513**	**5.1044**	**0.0165**	**1.7884**	**0.0134**	**1.8018**	**0.4743**	**0.0123**	**0.4866**		**1,641.0852**	**1,641.0852**	**0.0401**		**1,642.0886**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Unmitigated	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1119.16	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2865	46.4651	31.6150	0.0642	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,221.4937	6,221.4937	1.9491	0.0000	6,270.2214
2022	5.7218	38.9024	47.3319	0.1455	9.8688	1.6366	10.7736	3.6558	1.5057	5.1615	0.0000	14,630.3099	14,630.3099	1.9499	0.0000	14,657.2663
2023	5.2705	26.4914	44.5936	0.1413	9.8688	0.7800	10.6488	2.6381	0.7328	3.3708	0.0000	14,210.3424	14,210.3424	1.0230	0.0000	14,235.9160
2024	237.2328	9.5610	15.0611	0.0243	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,352.4178	2,352.4178	0.7175	0.0000	2,370.3550
Maximum	**237.2328**	**46.4651**	**47.3319**	**0.1455**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**14,630.3099**	**14,630.3099**	**1.9499**	**0.0000**	**14,657.2663**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2865	46.4651	31.6150	0.0642	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,221.4937	6,221.4937	1.9491	0.0000	6,270.2214
2022	5.7218	38.9024	47.3319	0.1455	9.8688	1.6366	10.7736	3.6558	1.5057	5.1615	0.0000	14,630.3099	14,630.3099	1.9499	0.0000	14,657.2663
2023	5.2705	26.4914	44.5936	0.1413	9.8688	0.7800	10.6488	2.6381	0.7328	3.3708	0.0000	14,210.3424	14,210.3424	1.0230	0.0000	14,235.9160
2024	237.2328	9.5610	15.0611	0.0243	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,352.4178	2,352.4178	0.7175	0.0000	2,370.3550
Maximum	**237.2328**	**46.4651**	**47.3319**	**0.1455**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**14,630.3099**	**14,630.3099**	**1.9499**	**0.0000**	**14,657.2663**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Total	**40.7912**	**67.7872**	**202.7424**	**0.6043**	**45.9592**	**2.4640**	**48.4231**	**12.2950**	**2.4399**	**14.7349**	**0.0000**	**74,422.3787**	**74,422.3787**	**2.8429**	**0.4832**	**74,637.4417**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Total	**40.7912**	**67.7872**	**202.7424**	**0.6043**	**45.9592**	**2.4640**	**48.4231**	**12.2950**	**2.4399**	**14.7349**	**0.0000**	**74,422.3787**	**74,422.3787**	**2.8429**	**0.4832**	**74,637.4417**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		160.8377	160.8377	4.7300e-003		160.9560
Total	**0.2019**	**4.1943**	**1.5706**	**0.0133**	**0.4346**	**0.0141**	**0.4487**	**0.1176**	**0.0135**	**0.1311**		**1,430.6932**	**1,430.6932**	**0.0955**		**1,433.0812**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		160.8377	160.8377	4.7300e-003		160.9560
Total	**0.2019**	**4.1943**	**1.5706**	**0.0133**	**0.4346**	**0.0141**	**0.4487**	**0.1176**	**0.0135**	**0.1311**		**1,430.6932**	**1,430.6932**	**0.0955**		**1,433.0812**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		193.0052	193.0052	5.6800e-003		193.1472
Total	**0.0858**	**0.0587**	**0.6629**	**1.9400e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**193.0052**	**193.0052**	**5.6800e-003**		**193.1472**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		193.0052	193.0052	5.6800e-003		193.1472
Total	**0.0858**	**0.0587**	**0.6629**	**1.9400e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**193.0052**	**193.0052**	**5.6800e-003**		**193.1472**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.0954**	**0.0652**	**0.7365**	**2.1500e-003**	**0.2236**	**1.8100e-003**	**0.2254**	**0.0593**	**1.6600e-003**	**0.0610**		**214.4502**	**214.4502**	**6.3100e-003**		**214.6080**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.0954**	**0.0652**	**0.7365**	**2.1500e-003**	**0.2236**	**1.8100e-003**	**0.2254**	**0.0593**	**1.6600e-003**	**0.0610**		**214.4502**	**214.4502**	**6.3100e-003**		**214.6080**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.0896**	**0.0589**	**0.6784**	**2.0800e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6100e-003**	**0.0609**		**206.9139**	**206.9139**	**5.7000e-003**		**207.0563**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.0896**	**0.0589**	**0.6784**	**2.0800e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6100e-003**	**0.0609**		**206.9139**	**206.9139**	**5.7000e-003**		**207.0563**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	3.5872	2.3593	27.1680	0.0832	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,286.9013	8,286.9013	0.2282		8,292.6058
Total	**4.0156**	**15.5266**	**30.9685**	**0.1186**	**9.8688**	**0.0957**	**9.9645**	**2.6381**	**0.0891**	**2.7271**		**12,075.9763**	**12,075.9763**	**0.4663**		**12,087.6341**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	3.5872	2.3593	27.1680	0.0832	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,286.9013	8,286.9013	0.2282		8,292.6058
Total	**4.0156**	**15.5266**	**30.9685**	**0.1186**	**9.8688**	**0.0957**	**9.9645**	**2.6381**	**0.0891**	**2.7271**		**12,075.9763**	**12,075.9763**	**0.4663**		**12,087.6341**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752		3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	3.3795	2.1338	24.9725	0.0801	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		7,983.7318	7,983.7318	0.2055		7,988.8683
Total	**3.6978**	**12.1065**	**28.3496**	**0.1144**	**9.8688**	**0.0803**	**9.9491**	**2.6381**	**0.0743**	**2.7124**		**11,655.1325**	**11,655.1325**	**0.4151**		**11,665.5099**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752		3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	3.3795	2.1338	24.9725	0.0801	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		7,983.7318	7,983.7318	0.2055		7,988.8683
Total	**3.6978**	**12.1065**	**28.3496**	**0.1144**	**9.8688**	**0.0803**	**9.9491**	**2.6381**	**0.0743**	**2.7124**		**11,655.1325**	**11,655.1325**	**0.4151**		**11,665.5099**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.0633**	**0.0400**	**0.4677**	**1.5000e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**149.5081**	**149.5081**	**3.8500e-003**		**149.6043**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.0633**	**0.0400**	**0.4677**	**1.5000e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**149.5081**	**149.5081**	**3.8500e-003**		**149.6043**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0601	0.0364	0.4354	1.4500e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		144.8706	144.8706	3.5300e-003		144.9587
Total	**0.0601**	**0.0364**	**0.4354**	**1.4500e-003**	**0.1677**	**1.2600e-003**	**0.1689**	**0.0445**	**1.1600e-003**	**0.0456**		**144.8706**	**144.8706**	**3.5300e-003**		**144.9587**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0601	0.0364	0.4354	1.4500e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		144.8706	144.8706	3.5300e-003		144.9587
Total	**0.0601**	**0.0364**	**0.4354**	**1.4500e-003**	**0.1677**	**1.2600e-003**	**0.1689**	**0.0445**	**1.1600e-003**	**0.0456**		**144.8706**	**144.8706**	**3.5300e-003**		**144.9587**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6406	0.3886	4.6439	0.0155	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,545.2860	1,545.2860	0.0376		1,546.2262
Total	**0.6406**	**0.3886**	**4.6439**	**0.0155**	**1.7884**	**0.0134**	**1.8018**	**0.4743**	**0.0123**	**0.4866**		**1,545.2860**	**1,545.2860**	**0.0376**		**1,546.2262**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6406	0.3886	4.6439	0.0155	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,545.2860	1,545.2860	0.0376		1,546.2262
Total	**0.6406**	**0.3886**	**4.6439**	**0.0155**	**1.7884**	**0.0134**	**1.8018**	**0.4743**	**0.0123**	**0.4866**		**1,545.2860**	**1,545.2860**	**0.0376**		**1,546.2262**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Unmitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1119.16	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Trips and VMT - Local hire provision

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82

tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27
tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1704	1.8234	1.1577	2.3800e-003	0.4141	0.0817	0.4958	0.1788	0.0754	0.2542	0.0000	210.7654	210.7654	0.0600	0.0000	212.2661
2022	0.5865	4.0240	5.1546	0.0155	0.9509	0.1175	1.0683	0.2518	0.1103	0.3621	0.0000	1,418.6554	1,418.6554	0.1215	0.0000	1,421.6925
2023	0.5190	3.2850	4.7678	0.0147	0.8497	0.0971	0.9468	0.2283	0.0912	0.3195	0.0000	1,342.4412	1,342.4412	0.1115	0.0000	1,345.2291
2024	4.1592	0.1313	0.2557	5.0000e-004	0.0221	6.3900e-003	0.0285	5.8700e-003	5.9700e-003	0.0118	0.0000	44.6355	44.6355	7.8300e-003	0.0000	44.8311
Maximum	**4.1592**	**4.0240**	**5.1546**	**0.0155**	**0.9509**	**0.1175**	**1.0683**	**0.2518**	**0.1103**	**0.3621**	**0.0000**	**1,418.6554**	**1,418.6554**	**0.1215**	**0.0000**	**1,421.6925**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1704	1.8234	1.1577	2.3800e-003	0.4141	0.0817	0.4958	0.1788	0.0754	0.2542	0.0000	210.7651	210.7651	0.0600	0.0000	212.2658
2022	0.5865	4.0240	5.1546	0.0155	0.9509	0.1175	1.0683	0.2518	0.1103	0.3621	0.0000	1,418.6550	1,418.6550	0.1215	0.0000	1,421.6921
2023	0.5190	3.2850	4.7678	0.0147	0.8497	0.0971	0.9468	0.2283	0.0912	0.3195	0.0000	1,342.4409	1,342.4409	0.1115	0.0000	1,345.2287
2024	4.1592	0.1313	0.2557	5.0000e-004	0.0221	6.3900e-003	0.0285	5.8700e-003	5.9700e-003	0.0118	0.0000	44.6354	44.6354	7.8300e-003	0.0000	44.8311
Maximum	**4.1592**	**4.0240**	**5.1546**	**0.0155**	**0.9509**	**0.1175**	**1.0683**	**0.2518**	**0.1103**	**0.3621**	**0.0000**	**1,418.6550**	**1,418.6550**	**0.1215**	**0.0000**	**1,421.6921**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2021	11-30-2021	1.4091	1.4091
2	12-1-2021	2-28-2022	1.3329	1.3329
3	3-1-2022	5-31-2022	1.1499	1.1499
4	6-1-2022	8-31-2022	1.1457	1.1457
5	9-1-2022	11-30-2022	1.1415	1.1415
6	12-1-2022	2-28-2023	1.0278	1.0278
7	3-1-2023	5-31-2023	0.9868	0.9868
8	6-1-2023	8-31-2023	0.9831	0.9831

9	**9-1-2023**	**11-30-2023**	0.9798	0.9798
10	**12-1-2023**	**2-29-2024**	2.8757	2.8757
11	**3-1-2024**	**5-31-2024**	1.6188	1.6188
		Highest	2.8757	2.8757

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0012**	**51.0012**	**0.0144**	**0.0000**	**51.3601**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.3000e-004	6.0900e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.6900e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5281	1.5281	5.0000e-005	0.0000	1.5293
Total	**2.6500e-003**	**0.0639**	**0.0209**	**2.0000e-004**	**5.6200e-003**	**2.0000e-004**	**5.8200e-003**	**1.5300e-003**	**1.9000e-004**	**1.7200e-003**	**0.0000**	**18.9847**	**18.9847**	**1.2600e-003**	**0.0000**	**19.0161**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0011**	**51.0011**	**0.0144**	**0.0000**	**51.3600**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.3000e-004	6.0900e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.6900e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5281	1.5281	5.0000e-005	0.0000	1.5293
Total	**2.6500e-003**	**0.0639**	**0.0209**	**2.0000e-004**	**5.6200e-003**	**2.0000e-004**	**5.8200e-003**	**1.5300e-003**	**1.9000e-004**	**1.7200e-003**	**0.0000**	**18.9847**	**18.9847**	**1.2600e-003**	**0.0000**	**19.0161**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7061**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	4.3000e-004	4.8700e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2225	1.2225	4.0000e-005	0.0000	1.2234
Total	**5.8000e-004**	**4.3000e-004**	**4.8700e-003**	**1.0000e-005**	**1.3400e-003**	**1.0000e-005**	**1.3500e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.2225**	**1.2225**	**4.0000e-005**	**0.0000**	**1.2234**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7060**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	4.3000e-004	4.8700e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2225	1.2225	4.0000e-005	0.0000	1.2234
Total	**5.8000e-004**	**4.3000e-004**	**4.8700e-003**	**1.0000e-005**	**1.3400e-003**	**1.0000e-005**	**1.3500e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.2225**	**1.2225**	**4.0000e-005**	**0.0000**	**1.2234**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5405	103.5405	0.0335	0.0000	104.3776
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5405**	**103.5405**	**0.0335**	**0.0000**	**104.3776**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	9.0000e-004	0.0103	3.0000e-005	2.8300e-003	2.0000e-005	2.8600e-003	7.5000e-004	2.0000e-005	7.8000e-004	0.0000	2.5808	2.5808	8.0000e-005	0.0000	2.5828
Total	**1.2200e-003**	**9.0000e-004**	**0.0103**	**3.0000e-005**	**2.8300e-003**	**2.0000e-005**	**2.8600e-003**	**7.5000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.5808**	**2.5808**	**8.0000e-005**	**0.0000**	**2.5828**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5403	103.5403	0.0335	0.0000	104.3775
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5403**	**103.5403**	**0.0335**	**0.0000**	**104.3775**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	9.0000e-004	0.0103	3.0000e-005	2.8300e-003	2.0000e-005	2.8600e-003	7.5000e-004	2.0000e-005	7.8000e-004	0.0000	2.5808	2.5808	8.0000e-005	0.0000	2.5828
Total	**1.2200e-003**	**9.0000e-004**	**0.0103**	**3.0000e-005**	**2.8300e-003**	**2.0000e-005**	**2.8600e-003**	**7.5000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.5808**	**2.5808**	**8.0000e-005**	**0.0000**	**2.5828**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4587	0.4587	1.0000e-005	0.0000	0.4590
Total	**2.1000e-004**	**1.5000e-004**	**1.7400e-003**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4587**	**0.4587**	**1.0000e-005**	**0.0000**	**0.4590**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4587	0.4587	1.0000e-005	0.0000	0.4590
Total	**2.1000e-004**	**1.5000e-004**	**1.7400e-003**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4587**	**0.4587**	**1.0000e-005**	**0.0000**	**0.4590**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1324	293.1324	0.0702	0.0000	294.8881
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1324**	**293.1324**	**0.0702**	**0.0000**	**294.8881**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.3051	0.2164	2.5233	7.3500e-003	0.7557	6.2300e-003	0.7619	0.2007	5.7400e-003	0.2065	0.0000	663.9936	663.9936	0.0187	0.0000	664.4604
Total	**0.3578**	**1.9125**	**2.9812**	**0.0119**	**0.8696**	**9.4100e-003**	**0.8790**	**0.2336**	**8.7800e-003**	**0.2424**	**0.0000**	**1,105.9771**	**1,105.9771**	**0.0451**	**0.0000**	**1,107.1039**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1321	293.1321	0.0702	0.0000	294.8877
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1321**	**293.1321**	**0.0702**	**0.0000**	**294.8877**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.3051	0.2164	2.5233	7.3500e-003	0.7557	6.2300e-003	0.7619	0.2007	5.7400e-003	0.2065	0.0000	663.9936	663.9936	0.0187	0.0000	664.4604
Total	**0.3578**	**1.9125**	**2.9812**	**0.0119**	**0.8696**	**9.4100e-003**	**0.8790**	**0.2336**	**8.7800e-003**	**0.2424**	**0.0000**	**1,105.9771**	**1,105.9771**	**0.0451**	**0.0000**	**1,107.1039**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2789	286.2789	0.0681	0.0000	287.9814
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2789**	**286.2789**	**0.0681**	**0.0000**	**287.9814**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.2795	0.1910	2.2635	6.9100e-003	0.7377	5.9100e-003	0.7436	0.1960	5.4500e-003	0.2014	0.0000	624.5363	624.5363	0.0164	0.0000	624.9466
Total	**0.3177**	**1.4420**	**2.6646**	**0.0112**	**0.8490**	**7.3700e-003**	**0.8564**	**0.2281**	**6.8500e-003**	**0.2349**	**0.0000**	**1,042.5294**	**1,042.5294**	**0.0392**	**0.0000**	**1,043.5090**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2785	286.2785	0.0681	0.0000	287.9811
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2785**	**286.2785**	**0.0681**	**0.0000**	**287.9811**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.2795	0.1910	2.2635	6.9100e-003	0.7377	5.9100e-003	0.7436	0.1960	5.4500e-003	0.2014	0.0000	624.5363	624.5363	0.0164	0.0000	624.9466
Total	**0.3177**	**1.4420**	**2.6646**	**0.0112**	**0.8490**	**7.3700e-003**	**0.8564**	**0.2281**	**6.8500e-003**	**0.2349**	**0.0000**	**1,042.5294**	**1,042.5294**	**0.0392**	**0.0000**	**1,043.5090**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.9000e-004	2.2300e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6156	0.6156	2.0000e-005	0.0000	0.6160
Total	**2.8000e-004**	**1.9000e-004**	**2.2300e-003**	**1.0000e-005**	**7.3000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6156**	**0.6156**	**2.0000e-005**	**0.0000**	**0.6160**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.9000e-004	2.2300e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6156	0.6156	2.0000e-005	0.0000	0.6160
Total	**2.8000e-004**	**1.9000e-004**	**2.2300e-003**	**1.0000e-005**	**7.3000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6156**	**0.6156**	**2.0000e-005**	**0.0000**	**0.6160**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	2.9000e-004	3.5100e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.0094	1.0094	3.0000e-005	0.0000	1.0100
Total	**4.4000e-004**	**2.9000e-004**	**3.5100e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.0094**	**1.0094**	**3.0000e-005**	**0.0000**	**1.0100**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	2.9000e-004	3.5100e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.0094	1.0094	3.0000e-005	0.0000	1.0100
Total	**4.4000e-004**	**2.9000e-004**	**3.5100e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.0094**	**1.0094**	**3.0000e-005**	**0.0000**	**1.0100**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4800e-003	4.9300e-003	0.0596	1.9000e-004	0.0209	1.6000e-004	0.0211	5.5500e-003	1.5000e-004	5.7000e-003	0.0000	17.1287	17.1287	4.3000e-004	0.0000	17.1394
Total	**7.4800e-003**	**4.9300e-003**	**0.0596**	**1.9000e-004**	**0.0209**	**1.6000e-004**	**0.0211**	**5.5500e-003**	**1.5000e-004**	**5.7000e-003**	**0.0000**	**17.1287**	**17.1287**	**4.3000e-004**	**0.0000**	**17.1394**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4800e-003	4.9300e-003	0.0596	1.9000e-004	0.0209	1.6000e-004	0.0211	5.5500e-003	1.5000e-004	5.7000e-003	0.0000	17.1287	17.1287	4.3000e-004	0.0000	17.1394
Total	**7.4800e-003**	**4.9300e-003**	**0.0596**	**1.9000e-004**	**0.0209**	**1.6000e-004**	**0.0211**	**5.5500e-003**	**1.5000e-004**	**5.7000e-003**	**0.0000**	**17.1287**	**17.1287**	**4.3000e-004**	**0.0000**	**17.1394**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Unmitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
NaturalGas Mitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478
NaturalGas Unmitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Unmitigated	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

7.0 Water Detail

7.1 Mitigation Measures Water

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	585.8052	3.0183	0.0755	683.7567
Unmitigated	585.8052	3.0183	0.0755	683.7567

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	207.8079	12.2811	0.0000	514.8354
Unmitigated	207.8079	12.2811	0.0000	514.8354

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Trips and VMT - Local hire provision

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82

tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27
tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2561	46.4415	31.4494	0.0636	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,163.4166	6,163.4166	1.9475	0.0000	6,212.1039
2022	4.5441	38.8811	40.8776	0.1240	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,493.4403	12,493.4403	1.9485	0.0000	12,518.5707
2023	4.1534	25.7658	38.7457	0.1206	7.0088	0.7592	7.7679	1.8799	0.7136	2.5935	0.0000	12,150.4890	12,150.4890	0.9589	0.0000	12,174.4615
2024	237.0219	9.5478	14.9642	0.0239	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,313.1808	2,313.1808	0.7166	0.0000	2,331.0956
Maximum	**237.0219**	**46.4415**	**40.8776**	**0.1240**	**18.2032**	**2.0456**	**20.2488**	**9.9670**	**1.8820**	**11.8490**	**0.0000**	**12,493.4403**	**12,493.4403**	**1.9485**	**0.0000**	**12,518.5707**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2561	46.4415	31.4494	0.0636	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,163.4166	6,163.4166	1.9475	0.0000	6,212.1039
2022	4.5441	38.8811	40.8776	0.1240	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,493.4403	12,493.4403	1.9485	0.0000	12,518.5707
2023	4.1534	25.7658	38.7457	0.1206	7.0088	0.7592	7.7679	1.8799	0.7136	2.5935	0.0000	12,150.4890	12,150.4890	0.9589	0.0000	12,174.4615
2024	237.0219	9.5478	14.9642	0.0239	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,313.1808	2,313.1808	0.7166	0.0000	2,331.0955
Maximum	**237.0219**	**46.4415**	**40.8776**	**0.1240**	**18.2032**	**2.0456**	**20.2488**	**9.9670**	**1.8820**	**11.8490**	**0.0000**	**12,493.4403**	**12,493.4403**	**1.9485**	**0.0000**	**12,518.5707**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.2413	1,292.2413	0.0877		1,294.4337
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0487	0.0313	0.4282	1.1800e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		117.2799	117.2799	3.5200e-003		117.3678
Total	**0.1760**	**4.1265**	**1.3884**	**0.0131**	**0.3810**	**0.0135**	**0.3946**	**0.1034**	**0.0129**	**0.1163**		**1,409.5212**	**1,409.5212**	**0.0912**		**1,411.8015**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.2413	1,292.2413	0.0877		1,294.4337
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0487	0.0313	0.4282	1.1800e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		117.2799	117.2799	3.5200e-003		117.3678
Total	**0.1760**	**4.1265**	**1.3884**	**0.0131**	**0.3810**	**0.0135**	**0.3946**	**0.1034**	**0.0129**	**0.1163**		**1,409.5212**	**1,409.5212**	**0.0912**		**1,411.8015**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0584	0.0375	0.5139	1.4100e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374		140.7359	140.7359	4.2200e-003		140.8414
Total	**0.0584**	**0.0375**	**0.5139**	**1.4100e-003**	**0.1369**	**1.1400e-003**	**0.1381**	**0.0363**	**1.0500e-003**	**0.0374**		**140.7359**	**140.7359**	**4.2200e-003**		**140.8414**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0584	0.0375	0.5139	1.4100e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374		140.7359	140.7359	4.2200e-003		140.8414
Total	**0.0584**	**0.0375**	**0.5139**	**1.4100e-003**	**0.1369**	**1.1400e-003**	**0.1381**	**0.0363**	**1.0500e-003**	**0.0374**		**140.7359**	**140.7359**	**4.2200e-003**		**140.8414**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0649	0.0417	0.5710	1.5700e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415		156.3732	156.3732	4.6900e-003		156.4904
Total	**0.0649**	**0.0417**	**0.5710**	**1.5700e-003**	**0.1521**	**1.2700e-003**	**0.1534**	**0.0404**	**1.1700e-003**	**0.0415**		**156.3732**	**156.3732**	**4.6900e-003**		**156.4904**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0649	0.0417	0.5710	1.5700e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415		156.3732	156.3732	4.6900e-003		156.4904
Total	**0.0649**	**0.0417**	**0.5710**	**1.5700e-003**	**0.1521**	**1.2700e-003**	**0.1534**	**0.0404**	**1.1700e-003**	**0.0415**		**156.3732**	**156.3732**	**4.6900e-003**		**156.4904**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0607	0.0376	0.5263	1.5100e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415		150.8754	150.8754	4.2400e-003		150.9813
Total	**0.0607**	**0.0376**	**0.5263**	**1.5100e-003**	**0.1521**	**1.2300e-003**	**0.1534**	**0.0404**	**1.1300e-003**	**0.0415**		**150.8754**	**150.8754**	**4.2400e-003**		**150.9813**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0607	0.0376	0.5263	1.5100e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415		150.8754	150.8754	4.2400e-003		150.9813
Total	**0.0607**	**0.0376**	**0.5263**	**1.5100e-003**	**0.1521**	**1.2300e-003**	**0.1534**	**0.0404**	**1.1300e-003**	**0.0415**		**150.8754**	**150.8754**	**4.2400e-003**		**150.9813**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.5482	3,896.5482	0.2236		3,902.1384
Worker	2.4299	1.5074	21.0801	0.0607	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		6,042.5585	6,042.5585	0.1697		6,046.8000
Total	**2.8378**	**14.7106**	**24.5142**	**0.0971**	**7.0087**	**0.0741**	**7.0828**	**1.8799**	**0.0691**	**1.9490**		**9,939.1067**	**9,939.1067**	**0.3933**		**9,948.9384**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.5482	3,896.5482	0.2236		3,902.1384
Worker	2.4299	1.5074	21.0801	0.0607	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		6,042.5585	6,042.5585	0.1697		6,046.8000
Total	**2.8378**	**14.7106**	**24.5142**	**0.0971**	**7.0087**	**0.0741**	**7.0828**	**1.8799**	**0.0691**	**1.9490**		**9,939.1067**	**9,939.1067**	**0.3933**		**9,948.9384**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	2.2780	1.3628	19.4002	0.0584	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604		5,821.4028	5,821.4028	0.1529		5,825.2254
Total	**2.5807**	**11.3809**	**22.5017**	**0.0936**	**7.0088**	**0.0595**	**7.0682**	**1.8799**	**0.0552**	**1.9350**		**9,595.2790**	**9,595.2790**	**0.3511**		**9,604.0554**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	2.2780	1.3628	19.4002	0.0584	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604		5,821.4028	5,821.4028	0.1529		5,825.2254
Total	**2.5807**	**11.3809**	**22.5017**	**0.0936**	**7.0088**	**0.0595**	**7.0682**	**1.8799**	**0.0552**	**1.9350**		**9,595.2790**	**9,595.2790**	**0.3511**		**9,604.0554**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0427	0.0255	0.3633	1.0900e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311		109.0150	109.0150	2.8600e-003		109.0866
Total	**0.0427**	**0.0255**	**0.3633**	**1.0900e-003**	**0.1141**	**9.0000e-004**	**0.1150**	**0.0303**	**8.3000e-004**	**0.0311**		**109.0150**	**109.0150**	**2.8600e-003**		**109.0866**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0427	0.0255	0.3633	1.0900e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311		109.0150	109.0150	2.8600e-003		109.0866
Total	**0.0427**	**0.0255**	**0.3633**	**1.0900e-003**	**0.1141**	**9.0000e-004**	**0.1150**	**0.0303**	**8.3000e-004**	**0.0311**		**109.0150**	**109.0150**	**2.8600e-003**		**109.0866**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0403	0.0233	0.3384	1.0600e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311		105.6336	105.6336	2.6300e-003		105.6992
Total	**0.0403**	**0.0233**	**0.3384**	**1.0600e-003**	**0.1141**	**8.8000e-004**	**0.1150**	**0.0303**	**8.1000e-004**	**0.0311**		**105.6336**	**105.6336**	**2.6300e-003**		**105.6992**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0403	0.0233	0.3384	1.0600e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311		105.6336	105.6336	2.6300e-003		105.6992
Total	**0.0403**	**0.0233**	**0.3384**	**1.0600e-003**	**0.1141**	**8.8000e-004**	**0.1150**	**0.0303**	**8.1000e-004**	**0.0311**		**105.6336**	**105.6336**	**2.6300e-003**		**105.6992**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.4296	0.2481	3.6098	0.0113	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,126.7583	1,126.7583	0.0280		1,127.4583
Total	**0.4296**	**0.2481**	**3.6098**	**0.0113**	**1.2171**	**9.4300e-003**	**1.2266**	**0.3229**	**8.6800e-003**	**0.3315**		**1,126.7583**	**1,126.7583**	**0.0280**		**1,127.4583**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.4296	0.2481	3.6098	0.0113	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,126.7583	1,126.7583	0.0280		1,127.4583
Total	**0.4296**	**0.2481**	**3.6098**	**0.0113**	**1.2171**	**9.4300e-003**	**1.2266**	**0.3229**	**8.6800e-003**	**0.3315**		**1,126.7583**	**1,126.7583**	**0.0280**		**1,127.4583**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Unmitigated	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1119.16	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Trips and VMT - Local hire provision

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82

tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27
tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2621	46.4460	31.4068	0.0635	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,154.3377	6,154.3377	1.9472	0.0000	6,203.0186
2022	4.7966	38.8851	39.6338	0.1195	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,035.3440	12,035.3440	1.9482	0.0000	12,060.6013
2023	4.3939	25.8648	37.5031	0.1162	7.0088	0.7598	7.7685	1.8799	0.7142	2.5940	0.0000	11,710.4080	11,710.4080	0.9617	0.0000	11,734.4497
2024	237.0656	9.5503	14.9372	0.0238	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,307.0517	2,307.0517	0.7164	0.0000	2,324.9627
Maximum	**237.0656**	**46.4460**	**39.6338**	**0.1195**	**18.2032**	**2.0456**	**20.2488**	**9.9670**	**1.8820**	**11.8490**	**0.0000**	**12,035.3440**	**12,035.3440**	**1.9482**	**0.0000**	**12,060.6013**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2621	46.4460	31.4068	0.0635	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,154.3377	6,154.3377	1.9472	0.0000	6,203.0186
2022	4.7966	38.8851	39.6338	0.1195	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,035.3440	12,035.3440	1.9482	0.0000	12,060.6013
2023	4.3939	25.8648	37.5031	0.1162	7.0088	0.7598	7.7685	1.8799	0.7142	2.5940	0.0000	11,710.4080	11,710.4080	0.9617	0.0000	11,734.4497
2024	237.0656	9.5503	14.9372	0.0238	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,307.0517	2,307.0517	0.7164	0.0000	2,324.9627
Maximum	**237.0656**	**46.4460**	**39.6338**	**0.1195**	**18.2032**	**2.0456**	**20.2488**	**9.9670**	**1.8820**	**11.8490**	**0.0000**	**12,035.3440**	**12,035.3440**	**1.9482**	**0.0000**	**12,060.6013**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Total	**40.7912**	**67.7872**	**202.7424**	**0.6043**	**45.9592**	**2.4640**	**48.4231**	**12.2950**	**2.4399**	**14.7349**	**0.0000**	**74,422.3787**	**74,422.3787**	**2.8429**	**0.4832**	**74,637.4417**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Total	**40.7912**	**67.7872**	**202.7424**	**0.6043**	**45.9592**	**2.4640**	**48.4231**	**12.2950**	**2.4399**	**14.7349**	**0.0000**	**74,422.3787**	**74,422.3787**	**2.8429**	**0.4832**	**74,637.4417**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0532	0.0346	0.3963	1.1100e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		110.4707	110.4707	3.3300e-003		110.5539
Total	**0.1835**	**4.1800**	**1.4144**	**0.0128**	**0.3810**	**0.0137**	**0.3948**	**0.1034**	**0.0131**	**0.1165**		**1,380.3262**	**1,380.3262**	**0.0941**		**1,382.6791**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0532	0.0346	0.3963	1.1100e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		110.4707	110.4707	3.3300e-003		110.5539
Total	**0.1835**	**4.1800**	**1.4144**	**0.0128**	**0.3810**	**0.0137**	**0.3948**	**0.1034**	**0.0131**	**0.1165**		**1,380.3262**	**1,380.3262**	**0.0941**		**1,382.6791**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0638	0.0415	0.4755	1.3300e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374		132.5649	132.5649	3.9900e-003		132.6646
Total	**0.0638**	**0.0415**	**0.4755**	**1.3300e-003**	**0.1369**	**1.1400e-003**	**0.1381**	**0.0363**	**1.0500e-003**	**0.0374**		**132.5649**	**132.5649**	**3.9900e-003**		**132.6646**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0638	0.0415	0.4755	1.3300e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374		132.5649	132.5649	3.9900e-003		132.6646
Total	**0.0638**	**0.0415**	**0.4755**	**1.3300e-003**	**0.1369**	**1.1400e-003**	**0.1381**	**0.0363**	**1.0500e-003**	**0.0374**		**132.5649**	**132.5649**	**3.9900e-003**		**132.6646**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0709	0.0462	0.5284	1.4800e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415		147.2943	147.2943	4.4300e-003		147.4051
Total	**0.0709**	**0.0462**	**0.5284**	**1.4800e-003**	**0.1521**	**1.2700e-003**	**0.1534**	**0.0404**	**1.1700e-003**	**0.0415**		**147.2943**	**147.2943**	**4.4300e-003**		**147.4051**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0709	0.0462	0.5284	1.4800e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415		147.2943	147.2943	4.4300e-003		147.4051
Total	**0.0709**	**0.0462**	**0.5284**	**1.4800e-003**	**0.1521**	**1.2700e-003**	**0.1534**	**0.0404**	**1.1700e-003**	**0.0415**		**147.2943**	**147.2943**	**4.4300e-003**		**147.4051**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0665	0.0416	0.4861	1.4300e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415		142.1207	142.1207	4.0000e-003		142.2207
Total	**0.0665**	**0.0416**	**0.4861**	**1.4300e-003**	**0.1521**	**1.2300e-003**	**0.1534**	**0.0404**	**1.1300e-003**	**0.0415**		**142.1207**	**142.1207**	**4.0000e-003**		**142.2207**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0665	0.0416	0.4861	1.4300e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415		142.1207	142.1207	4.0000e-003		142.2207
Total	**0.0665**	**0.0416**	**0.4861**	**1.4300e-003**	**0.1521**	**1.2300e-003**	**0.1534**	**0.0404**	**1.1300e-003**	**0.0415**		**142.1207**	**142.1207**	**4.0000e-003**		**142.2207**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	2.6620	1.6677	19.4699	0.0571	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		5,691.9354	5,691.9354	0.1602		5,695.9408
Total	**3.0904**	**14.8350**	**23.2704**	**0.0926**	**7.0087**	**0.0749**	**7.0836**	**1.8799**	**0.0699**	**1.9498**		**9,481.0104**	**9,481.0104**	**0.3984**		**9,490.9691**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	2.6620	1.6677	19.4699	0.0571	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		5,691.9354	5,691.9354	0.1602		5,695.9408
Total	**3.0904**	**14.8350**	**23.2704**	**0.0926**	**7.0087**	**0.0749**	**7.0836**	**1.8799**	**0.0699**	**1.9498**		**9,481.0104**	**9,481.0104**	**0.3984**		**9,490.9691**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752		3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	2.5029	1.5073	17.8820	0.0550	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604		5,483.7974	5,483.7974	0.1442		5,487.4020
Total	**2.8211**	**11.4799**	**21.2591**	**0.0893**	**7.0088**	**0.0601**	**7.0688**	**1.8799**	**0.0557**	**1.9356**		**9,155.1981**	**9,155.1981**	**0.3538**		**9,164.0437**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752		3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	2.5029	1.5073	17.8820	0.0550	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604		5,483.7974	5,483.7974	0.1442		5,487.4020
Total	**2.8211**	**11.4799**	**21.2591**	**0.0893**	**7.0088**	**0.0601**	**7.0688**	**1.8799**	**0.0557**	**1.9356**		**9,155.1981**	**9,155.1981**	**0.3538**		**9,164.0437**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0282	0.3349	1.0300e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311		102.6928	102.6928	2.7000e-003		102.7603
Total	**0.0469**	**0.0282**	**0.3349**	**1.0300e-003**	**0.1141**	**9.0000e-004**	**0.1150**	**0.0303**	**8.3000e-004**	**0.0311**		**102.6928**	**102.6928**	**2.7000e-003**		**102.7603**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0282	0.3349	1.0300e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311		102.6928	102.6928	2.7000e-003		102.7603
Total	**0.0469**	**0.0282**	**0.3349**	**1.0300e-003**	**0.1141**	**9.0000e-004**	**0.1150**	**0.0303**	**8.3000e-004**	**0.0311**		**102.6928**	**102.6928**	**2.7000e-003**		**102.7603**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0444	0.0257	0.3114	1.0000e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311		99.5045	99.5045	2.4700e-003		99.5663
Total	**0.0444**	**0.0257**	**0.3114**	**1.0000e-003**	**0.1141**	**8.8000e-004**	**0.1150**	**0.0303**	**8.1000e-004**	**0.0311**		**99.5045**	**99.5045**	**2.4700e-003**		**99.5663**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0444	0.0257	0.3114	1.0000e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311		99.5045	99.5045	2.4700e-003		99.5663
Total	**0.0444**	**0.0257**	**0.3114**	**1.0000e-003**	**0.1141**	**8.8000e-004**	**0.1150**	**0.0303**	**8.1000e-004**	**0.0311**		**99.5045**	**99.5045**	**2.4700e-003**		**99.5663**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.4734	0.2743	3.3220	0.0107	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,061.3818	1,061.3818	0.0264		1,062.0410
Total	**0.4734**	**0.2743**	**3.3220**	**0.0107**	**1.2171**	**9.4300e-003**	**1.2266**	**0.3229**	**8.6800e-003**	**0.3315**		**1,061.3818**	**1,061.3818**	**0.0264**		**1,062.0410**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.4734	0.2743	3.3220	0.0107	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,061.3818	1,061.3818	0.0264		1,062.0410
Total	**0.4734**	**0.2743**	**3.3220**	**0.0107**	**1.2171**	**9.4300e-003**	**1.2266**	**0.3229**	**8.6800e-003**	**0.3315**		**1,061.3818**	**1,061.3818**	**0.0264**		**1,062.0410**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Unmitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1119.16	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment C

Local Hire Provision Net Change	
Without Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,623
Amortized (MT CO2e/year)	120.77
With Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,024
Amortized (MT CO2e/year)	100.80
% Decrease in Construction-related GHG Emissions	***17%***

EXHIBIT B

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from unconventional oil drilling operations, oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, and many other industrial and agricultural sources. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at dozens of sites and has testified as an expert witness on more than ten cases involving exposure to air contaminants from industrial sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health.* 18:48

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Rosenfeld, P.E. (April 19-23, 2009). Perfluoroctanoic Acid (PFOA) and Perfluoroactane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

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Rosenfeld, P. E. (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23rd Annual International Conferences on Soils Sediment and Water.* Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. The *23rd Annual International Conferences on Soils Sediment and Water*. Lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld P. E. (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

Rosenfeld P. E. (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting.* Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition.* Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference.* Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference.* Lecture conducted from Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference.* Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference.* Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants*.. Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association*. Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conferenc*e. Lecture conducted from Indianapolis, Maryland.

Rosenfeld. P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation.* Lecture conducted from Anaheim California.

Rosenfeld. P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest.* Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association*. Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings*. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America*. Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell.* Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest.* Lecture conducted from Lake Chelan, Washington.

Rosenfeld, P.E, C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America*. Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. $41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: $10,000 grant awarded to San Diego State University.
Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. $100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. $20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: $10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: $15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. $500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

Deposition and/or Trial Testimony:

In the United States District Court For The District of New Jersey
Duarte et al, *Plaintiffs,* vs. United States Metals Refining Company et. al. *Defendant.*
Case No.: 2:17-cv-01624-ES-SCM
Rosenfeld Deposition. 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division
M/T Carla Maersk, *Plaintiffs,* vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS "Conti Perdido" *Defendant.*
Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237
Rosenfeld Deposition. 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants
Case No.: No. BC615636
Rosenfeld Deposition, 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants
Case No.: No. BC646857
Rosenfeld Deposition, 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado
Bells et al. Plaintiff vs. The 3M Company et al., Defendants
Case: No 1:16-cv-02531-RBJ
Rosenfeld Deposition, 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District
Phillip Bales et al., Plaintiff vs. Dow Agrosciences, LLC, et al., Defendants
Cause No 1923
Rosenfeld Deposition, 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa
Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants
Cause No C12-01481
Rosenfeld Deposition, 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 8-23-2017

In The Superior Court of the State of California, For The County of Los Angeles
Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC
Case No.: LC102019 (c/w BC582154)
Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., *Plaintiffs,* vs. Meritor Inc., et al., *Defendants*
Case Number: 4:16-cv-52-DMB-JVM
Rosenfeld Deposition: July 2017

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No.: No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial, March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No.: RG14711115
Rosenfeld Deposition, September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No.: LALA002187
Rosenfeld Deposition, August 2015

In The Iowa District Court For Wapello County
Jerry Dovico, et al., Plaintiffs vs. Valley View Sine LLC, et al., Defendants
Law No,: LALA105144 - Division A
Rosenfeld Deposition, August 2015

In The Iowa District Court For Wapello County
Doug Pauls, et al.,, et al., Plaintiffs vs. Richard Warren, et al., Defendants
Law No,: LALA105144 - Division A
Rosenfeld Deposition, August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action N0. 14-C-30000
Rosenfeld Deposition, June 2015

In The Third Judicial District County of Dona Ana, New Mexico
Betty Gonzalez, et al. Plaintiffs vs. Del Oro Dairy, Del Oro Real Estate LLC, Jerry Settles and Deward DeRuyter, Defendants
Rosenfeld Deposition: July 2015

In The Iowa District Court For Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No 4980
Rosenfeld Deposition: May 2015

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014

In the United States District Court Western District of Oklahoma
Tommy McCarty, et al., Plaintiffs, v. Oklahoma City Landfill, LLC d/b/a Southeast Oklahoma City Landfill, et al. Defendants.
Case No. 5:12-cv-01152-C
Rosenfeld Deposition: July 2014

In the County Court of Dallas County Texas
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant.*
Case Number cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs,* vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition: October 2012

In the United States District Court of Southern District of Texas Galveston Division
Kyle Cannon, Eugene Donovan, Genaro Ramirez, Carol Sassler, and Harvey Walton, each Individually and on behalf of those similarly situated, *Plaintiffs,* vs. BP Products North America, Inc., *Defendant.*
Case 3:10-cv-00622
Rosenfeld Deposition: February 2012
Rosenfeld Trial: April 2013

In the Circuit Court of Baltimore County Maryland
Philip E. Cvach, II et al., *Plaintiffs* vs. Two Farms, Inc. d/b/a Royal Farms, Defendants
Case Number: 03-C-12-012487 OT
Rosenfeld Deposition: September 2013

EXHIBIT C

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Santa Monica, California 90401
Tel: (949) 887-9013
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Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

Geologic and Hydrogeologic Characterization
Industrial Stormwater Compliance
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
CEQA Review

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2014;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of over 100 environmental impact reports since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, Valley Fever, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Manager of a project to provide technical assistance to a community adjacent to a former Naval shipyard under a grant from the U.S. EPA.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.

- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt taught physical geology (lecture and lab and introductory geology at Golden West College in Huntington Beach, California from 2010 to 2014.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F**. 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examination, 2009-2011.

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Comment 9

Western States Regional Council of Carpenters/Mitchell M. Tsai Law Firm

9-A

This is an introductory comment that summarizes the Buttonbush Solar and Storage Project and provides information about the Western States Regional Council of Carpenters (Western Carpenters or WSRCC). This comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

9-B

This comment requests the use of the local workforce for the construction of the proposed Project. The comment states that by hiring a local workforce for the proposed Project, the local community will benefit economically and will reduce environmental impacts, including potentially reducing greenhouse gas (GHG) emissions. It should be noted that the comment does not define "local workforce."

As stated on page 4.15-48 of the Draft EIR, construction workers for the Buttonbush Solar and Storage Project are anticipated to commute from within Kern County, including the cities of Bakersfield, Shafter, Wasco, and the unincorporated communities of Buttonwillow. As such, analysis in the Draft EIR, on page 4.15-36, assumes that the average trip length for employee travel would be approximately 18 miles during the construction phase, which will consist of most of the employees for the Buttonbush Solar and Storage Project. The County reasonably concludes that this constitutes a local workforce. If the proposed Project is approved, the County also anticipates imposing a standard condition of approval that requires the Project proponent to encourage all contractors for the proposed Project to hire at least 50 percent of their workers from the local Kern County communities. Regardless, the Draft EIR analysis is based on reasonable assumptions for workforce characteristics in assessing air quality, GHG, and traffic impacts associated with the construction and operation of the proposed Project.

The operational phase of the proposed Project will consist of a much smaller workforce than the construction phase. As stated on page 3-113 of the Draft EIR, up to 20 full-time staff would operate and maintain the facility. The number of employees needed for the operational phase is smaller and is unlikely to attract potential employees outside of the local area. Employees for the operational phase are expected to come from various local communities, which include Bakersfield, Shafter, Wasco, and Buttonwillow. As a result, commutes to the Project site would be shorter and would create less GHG emissions. Additionally, the proposed Project would most likely employ a local workforce, which would benefit the local economy. Therefore, this comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

9-C

This comment requests additional training requirements to prevent the spread of COVID-19 and other infectious diseases at the Project site during the construction phase.

A discussion of COVID-19 can be found in the Draft EIR on page 4.3-32. Further analysis on COVID-19 can also be found on page 4.3-89 of the Draft EIR. Mitigation Measure MM 4.3-11 would be implemented to help prevent the spread of COVID-19 and other infectious diseases. Mitigation Measure MM 4.3-11 requires that a COVID-19 Health and Safety Plan be prepared in accordance with the Kern County Public Health Services Department and Kern County Health Officer mandates and be submitted for review and

approval to the Kern County Planning and Natural Resources Department; see page 4.3-92 of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

9-D

The comment explains the purpose of CEQA and indicates that the function of an EIR is to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences and ensure that the public is given adequate opportunity to comment on the proposed Project before the decision moves forward.

The comment letter states that the Draft EIR is legally flawed in various parts because it fails to substantiate all conclusions to allow meaningful public review and comment, fails to provide adequate mitigation measures, and fails to fully assess all pertinent environmental factors. The County acknowledges receipt of the comment letter by WSRCC, and detailed responses to each substantive comment are provided below. No changes to the Draft EIR are required per this comment. The comment has been noted for the record.

9-E

The comment states that the Draft EIR fails to properly study, analyze, and mitigate the proposed Project's biological resources impacts. The comment notes that the significance of impacts and EIR findings must be supported with substantial evidence.

The comment is introductory and does not provide specific information to support its claims. As discussed in Draft EIR Section 4.4, *Biological Resources*, extensive biological studies were prepared to support the analysis in the Draft EIR in accordance with CEQA reconnaissance and focused biological surveys were conducted from 2022 through 2024, which included plant community mapping, special-status plant surveys, burrow mapping, a San Joaquin antelope squirrel focused survey, Swainson's hawk habitat assessment, vernal pool fairy shrimp habitat assessment, small mammal trapping, and camera studies for Buena Vista Lake ornate shrew. Burrow mapping included a habitat assessment for blunt-nosed leopard lizard, burrowing owl, San Joaquin kit fox, and American badger. The specific research methodology and survey protocol data are provided in the Draft EIR Appendix D.2. Furthermore, the BRT was supplemented with additional surveys to support and refine the impact analysis. These included a vernal pool habitat assessment conducted in 2024, Buena Vista Lake ornate shrew camera studies in 2024, and small mammal trapping surveys completed in 2025. The survey methods for the small mammal trapping were approved by the wildlife agencies (see Appendix H of the BRTR), and the Applicant has maintained regular coordination with both CDFW and USFWS throughout the process. Furthermore, the Draft EIR includes 25 mitigation measures to minimize and reduce impacts. The County acknowledges the CEQA Guidelines and the definitions of these terms provided therein. No changes to the Draft EIR are required per this comment. The comment has been noted for the record.

9-F

The comment states that the Draft EIR mitigation measures do not include performance standards to quantify the success of mitigation and do not sufficiently mitigate the proposed Project's impacts to less-than-significant levels.

The comment provides various definitions from the CEQA Guidelines. Detailed responses to each substantive comment are provided below. No changes to the Draft EIR are required per this comment.

9-G

The comment states that additional mitigation measures are necessary to address impacts to plant and animal special-status species. The comment also states that certain mitigation measures are unlawfully deferred. The comment recites various species, which are discussed in the Draft EIR.

The comment is introductory and does not provide specific information to support its claims. The comment is noted, and detailed responses to each substantive comment are provided below.

9-H

The comment states that the Draft EIR does not provide sufficient evidence for how Mitigation Measures MM 4.4-1 through 4.4-7, 4.4-18, 4.4-19, and 4.4-21 would reduce impacts on Crotch's bumblebee to less than significant during construction and operation.

As stated in the Draft EIR, starting on page 4.4-65, Crotch's bumble bee has a moderate potential to occur in portions of Sites 1 through 3, 5, 6, and 8, and in portions of the gen-tie line route. This species occurs in open grassland and scrub communities supporting suitable floral resources. The biological study area supports floral resources for feeding and other habitat for nesting. Based on habitat modeling, the proposed Project may result in the modification of approximately 493 acres of moderately suitable Crotch's bumble bee habitat. The Draft EIR also explains potential direct and indirect impacts that may result from Project construction.

As provided in the Draft EIR, construction-related impacts would be reduced through the implementation of various mitigation measures. For example, Mitigation Measure MM 4.4-8 requires a qualified biologist, prior to any ground-disturbing activities, to conduct a pre-construction survey for Crotch's bumble bee. Mitigation Measure MM 4.4-8 further requires avoidance of any nest resources found on-site. Mitigation Measures MM 4.4-1, MM 4.4-2, and MM 4.4-3 also require worker training, biological monitoring, and general avoidance and protection measures. These measures are designed to reduce impacts by identifying any Crotch's bumble bee on site and implementing various measures to avoid direct and indirect impacts. Additionally, Mitigation Measures MM 4.4-4 (Special-Status Plant Surveys), MM 4.4-5 (Invasive Species Control), MM 4.4-6 (BMPs to Avoid Indirect Impacts to Special-Status Plants), MM 4.4-7 (Wildlife Clearance Surveys), MM 4.4-18 (Hazardous Waste Cleanup), MM 4.4-19 (Delineation of Property Boundaries), and MM 4.4-21 (Sensitive Vegetation Avoidance and Mitigation) would provide further mechanisms for identifying the species on-site, avoiding impacts to areas where the species might be located, and limiting direct and indirect impacts which might result from construction activities. Implementation of these mitigation measures would reduce the potential construction-related impacts to Crotch's bumble bee to less than significant.

As construction would modify conditions on-site, the potential for Crotch's bumble bee to nest on-site and, therefore, for direct and indirect impacts to occur, would be significantly reduced during the O&M phase. Regardless, potential impacts are addressed through implementation of the measures described above, which are designed to identify and avoid impacts to nests and other habitat. Accordingly, the Draft EIR properly explains how the mitigation measures would reduce impacts to less than significant.

9-I

The comment states that Draft EIR does not specify how mitigation measures are sufficient to address potential impacts to Crotch's bumble bee. The comment also asserts that the mitigation measures would not address cumulative impacts.

See response to Comment 9-H, above. The Draft EIR properly concludes that impacts to Crotch's bumble bee would be less than significant at the project-level. Regarding cumulative impacts, the Draft EIR considers the incremental effects of the proposed Project when combined with the effects of past projects, other current projects, and probable future projects and determines that impacts would be significant and unavoidable. Although project-level impacts would be reduced to less than significant through implementation of various mitigation measures, large-scale energy projects and urbanization pressures within Kern County have resulted in impacts to biological resources within the region on a cumulative level. Given the number of present and reasonably foreseeable future development projects in the San Joaquin Valley, the proposed Project, when combined with these projects, would contribute to an incremental cumulative loss of habitat for special-status species, and cumulative impacts would be significant and unavoidable.

This analysis is consistent with CEQA Guidelines Section 15355(b), which provides that cumulative impacts may result from individually minor but collectively significant projects taking place over a period of time. Further, the discussion of cumulative impacts need not provide detail as extensive as that required for effects attributable solely to the proposed Project. The discussion of cumulative impacts should be guided by standards of practicality and reasonableness (CEQA Guidelines Section 15130(b)). Accordingly, no revisions to the Draft EIR are necessary.

9-J

The comment includes text from the CEQA Guidelines to define an adequate discussion of cumulative impacts. The comment states the Draft EIR does not provide sufficient detail or analysis to adequately address cumulative impacts on biological resources.

See response to Comment 9-I, above. Further, the Draft EIR provides an extensive discussion of cumulative projects that would contribute to cumulative impacts in Section 3.11, *Cumulative Projects*, which is referenced in Section 4.4.5, *Cumulative Setting, Impacts, and Mitigation Measures*. As provided in Section 3.11, the cumulative analysis in Chapter 4, *Environmental Analysis*, of the Draft EIR evaluates the combined effects of the projects located within a 6-mile radius of the Project site, except where other approaches are appropriate (for example, use of a larger radius, or inclusion of specific projects that are outside of the selected radius given their potential to contribute substantially to the cumulative impact that is being analyzed). There are 25 cumulative projects within a 6-mile radius of the proposed Project, as identified in **Table 3-5:** *Cumulative Projects List*, and illustrated in **Figure 3-14:** *Cumulative Projects Map*. These projects were considered when analyzing cumulative conditions and impacts.

For biological resources, Section 4.4.5 refers to **Table 3.5:** *Cumulative Project List*: "As described in **Table 3.5:** *Cumulative Project List*, in Chapter 3, *Project Description*, of this EIR, other projects that could have impacts to biological resources similar to those identified above regarding the proposed Project, have been completed or are proposed within the southern San Joaquin Valley." See also the discussion in Section 4.4.5, *Cumulative Setting, Impacts, and Mitigation Measures*, regarding bioregions, which further informs the analysis of cumulative impacts. The Draft EIR considers the combined effects of the proposed

Project and cumulative projects on various resource areas, including special-status species and their habitat, sensitive natural communities, wetlands and non-wetlands waters, wildlife movement, and adopted habitat conservation plans. Accordingly, the Draft EIR analyzes cumulative impacts based on a list of projects in an appropriate geographical area that have the potential to cause similar impacts to biological resources, in accordance with CEQA. No revisions are necessary.

9-K

The comment asserts that the Draft EIR does not provide adequate baseline existing environmental conditions of biological resources on the Project site.

Draft EIR Section 4.4, *Biological Resources*, and Appendix D.2 described the existing physical environment on, and adjacent to, the Project site to document the baseline conditions. As stated in the Draft EIR, page 4.4-1, the analysis is on biological surveys of the Project site and buffer areas, including reconnaissance and focused biological surveys including rare plant surveys, burrow mapping, a San Joaquin antelope squirrel (*Ammospermophilus nelsoni*) focused survey, Swainson's hawk (*Buteo swainsoni*) habitat assessment, vernal pool fairy shrimp (*Branchinecta lynchi*) habitat assessment, small mammal trapping, and camera studies for Buena Vista Lake ornate shrew (*Sorex ornatus relictus*), which were conducted in 2022 through 2024. Additionally, aquatic resources jurisdictional delineations were conducted in 2023 and 2024, and vegetation mapping was conducted concurrently with the aquatic resources jurisdictional delineation. Further, a literature review of standard reference materials and relevant state and federal agency databases was conducted. These studies establish baseline conditions for the Project site, which are described in detail starting in Draft EIR Section 4.4.2, *Environmental Setting*, which includes a discussion of both regional environmental characteristics and local environmental characteristics, including a discussion of vegetation communities and land cover, sensitive natural communities, critical habitat, wetlands and waters, wildlife refuges and protected habitat areas, and plant and wildlife species. The Draft EIR devotes over 40 pages to a discussion of baseline conditions, which fully inform the analysis of potential project impacts to biological resources. No changes to the Draft EIR are required.

9-L

The comment states that the Draft EIR does not explain why impacts related to decommissioning are anticipated to be similar to the impacts of construction and that decommissioning should be further analyzed.

As described in the Draft EIR, page 3-116, once the functional operating life of the proposed Project is over, the facility would either be decommissioned to remove Project components and restore the site, or it would be repowered to continue providing solar energy generation and storage. Project decommissioning or repowering activities would be comparable in duration and scale to construction activities, such that potential environmental impacts also would be similar. With respect to biological resources more specifically, impacts during decommissioning likely will be more limited than during construction, as the conditions on-site would reflect an operating solar project, subject to regular maintenance activities over the anticipated 35-year life of the proposed Project. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

The comment further states that Mitigation Measures MM 4.4-1, 4.4-2, and 4.4-5 improperly defer mitigation. Regarding Mitigation Measures MM 4.4-1 and MM 4.4-2, the measures require the hiring of a Lead Biologist to oversee compliance with species-related measures and the preparation of a Worker

Environmental Awareness Training Program for personnel on-site. Neither measure constitutes deferred mitigation. CEQA does not require the Project proponent to identify or name a specific biologist during the EIR process. Rather, Mitigation Measure MM 4.4.-1 appropriately requires that, prior to construction activities, the Project proponent identify a Lead Biologist that meets specific qualifications to monitor construction activities and ensure all measures related to the protection of biological resources are implemented. Additionally, Mitigation Measure MM 4.4-2 properly identifies specific criteria for the Worker Environmental Awareness Training Program to ensure potential impacts to biological resources are mitigated, including identification information of special-status wildlife and plant species with potential to occur on-site, responsibilities for trash control, checking under and around vehicles and heavy equipment before starting, scanning for wildlife resources, contacting the Lead Biologist in the unanticipated instance of encountering special-status wildlife species, and prohibition of pets and firearms. The measure also mandates that all on-site personnel be required to attend a worker environmental training, verified through a sticker placed on hard hats, indicating that the worker has completed the Worker Environmental Awareness Training. Finally, copies of all prepared materials, including but not limited to PowerPoint presentations, videos, information handouts and signed acknowledgement from each worker who has attended the required training, must be provided to the Planning and Natural Resources Department.

Mitigation Measure MM 4.4-5 similarly identifies specific criteria for minimizing the spread of invasive species and reducing dust. For example, the mitigation measure requires the use of watering or soil stabilizer(s) during construction to avoid spread of invasive species and their seeds. The mitigation measure specifically provides where watering and soil stabilizers should be used: “Watering and soil stabilizer(s) shall be used in areas under construction (e.g., active grading or trenching) or unpaved or non-gravel roadways (dirt) being used to transport or move materials and machinery within the Project site. In addition, construction entrances and exits shall be stabilized (using riprap and/or metal grates) to minimize off-site transport of materials that may contain invasive species or seeds.” The measure further requires the removal of invasive species encountered during construction and the reseeding of various areas with a native seed mix. Accordingly, these measures properly identify specific criteria and specific steps that will be taken to ensure potential impacts to biological resources are mitigated. No revisions to the Draft EIR or these measures are required.

9-M

The comment states that the conclusion of significant and unavoidable cumulative air quality impacts is unsubstantiated.

As provided in the Draft EIR, under Impact 4.3-2, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and SJVAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project’s individual emissions would have a cumulatively significant impact on air quality. SJVAPCD’s attainment plans are designed to ensure the future attainment of state and federal ambient air quality standards. Consequently, SJVAPCD’s application of thresholds of significance for emissions of criteria air pollutants determines whether a project’s emissions would have a cumulatively considerable contribution to emissions of a criteria air pollutant for which SJVAPCD is in nonattainment. If project emissions exceed the thresholds of significance for criteria air pollutants, the proposed Project would be expected to result in a considerable net increase of any criteria air pollutant for which SJVAPCD is in nonattainment under applicable federal or state ambient air quality standards. The San Joaquin Valley

is in nonattainment for $PM_{2.5}$, PM_{10}, and ozone. Ozone is addressed by examining its precursors, which are NO_X and ROG.

Criteria air pollutant emissions associated with temporary construction activity were quantified using CalEEMod. Construction emissions were calculated for the estimated worst-case day over the construction period associated with each phase and reported as the annual emissions estimated during construction. Maximum daily emissions during construction were also calculated and compared against SJVAPCD screening thresholds.

Table 4.3-8: *Estimated Annual Construction Criteria Air Pollutant Emissions—Unmitigated*, presents the estimated annual construction emissions generated during construction of the proposed Project, including decommissioning activities. As shown in **Table 4.3-8:** *Estimated Annual Construction Criteria Air Pollutant Emissions—Unmitigated*, annual construction emissions would not exceed the SJVAPCD significance thresholds for ROG, CO, SOx, or $PM_{2.5}$; however, the proposed Project would exceed the threshold for NOx and PM_{10}. The proposed Project would also comply with SJVAPCD Rule 9510, ISR, which requires large development projects to reduce exhaust emissions from construction equipment by 20 percent for NOx and 45 percent for PM_{10}, compared to the statewide average. When accounting for compliance with Rule 9510, emissions of NOx and PM_{10} would not be reduced below levels of significance; thus, mitigation is required. **Table 4.3-9:** *Estimated Annual Construction Criteria Air Pollutant Emissions—Mitigated*, presents the estimated annual construction emissions generated during construction of the proposed Project with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5. As shown in **Table 4.3-9:** *Estimated Annual Construction Criteria Air Pollutant Emissions—Mitigated*, annual construction emissions with the implementation of Mitigation Measures MM 4.3-1 through MM 4.3-3 would not exceed the SJVAPCD significance thresholds for ROG, NO_x, CO, SO_x, or $PM_{2.5}$, but would exceed the threshold for PM_{10}. However, implementation of Mitigation Measure MM 4.3-4 would further reduce impacts related to Project-generated construction emissions to below SJVAPCD significance thresholds.

The maximum daily emissions during construction are shown in **Table 4.3-10:** *Maximum Daily Construction Criteria Air Pollutant Emissions—Unmitigated*. As shown in the table, the proposed Project would exceed the 100-pound-per-day screening threshold for NOx and CO, after assuming compliance with SJVAPCD Rule 9510. **Table 4.3-11:** *Maximum Daily Construction Criteria Air Pollutant Emissions—Mitigated*, shows the maximum daily construction emissions with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5. As shown in the table, with mitigation, the proposed Project would exceed the 100-pound-per-day screening threshold for CO after assuming compliance with SJVAPCD Rule 9510. As such, an ambient air quality assessment was prepared and, as shown in **Table 4.3-12:** *Construction Air Quality Impact Assessment—Unmitigated*, the unmitigated construction emissions would not exceed the significant impact levels for any pollutant. Additionally, as shown in **Table 4.3-13:** *Construction Air Quality Impact Assessment—Mitigated*, the proposed Project would result in construction activities that would generate ambient concentrations of criteria pollutants below the applicable thresholds with application of Mitigation Measures MM 4.3-1 through MM 4.3-5.

As discussed above and in Draft EIR, page 4.3-98, the project-level emissions of ROG, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ during construction are below SJVAPCD's significance thresholds, with implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5. As such, it was determined that the proposed Project would not obstruct SJVAPCD's ability to achieve further progress toward attainment of state standards. However, potential temporary cumulative impacts to air quality could occur from construction of the

proposed Project in combination with regional growth projections and other projects within 6 miles of the proposed Project in the same air basin. Therefore, the proposed Project would have a temporary, significant, and unavoidable impact related to construction emissions.

9-N

The comment states that there is not a sufficient explanation for how mitigation measures will reduce air quality impacts, focusing on Mitigation Measure MM 4.3-4 and stating that additional detail is needed regarding how the proposed DMA would mitigate construction impacts.

See response to Comment 9-M, above. Temporary air quality impacts associated with construction activities are less than significant with the implementation of Mitigation Measures MM 4.3-1 through MM 4.3-5.

Regarding Mitigation Measure MM 4.3-4, as provided on page 4.3-46, DMA or VERA are designed to reduce incremental emissions of criteria pollutants of NO_X, ROGs, and PM generated by a project. The emission reductions required by a DMA or VERA include pound-for-pound reductions through a process that funds and implements emission reduction projects administered by SJVAPCD. The emission reductions secured through VERAs are "surplus" of existing regulations, achieving reductions earlier or beyond those required by regulations. SJVAPCD regularly enters into such agreements, which support SJVAPCD's incentive programs that include a range of projects (e.g., electrification of stationary internal combustion engines, replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors). Further, according to SJVAPCD, its incentive programs are regularly audited by independent outside agencies, including professional accountancy corporations on behalf of the federal government, the California Air Resources Board, the California Department of Finance, and the California Bureau of State Audits. Accordingly, the DMA/VERA is expected to appropriately reduce Project-related emissions such that impacts would be less than significant.

The comment also states that the conclusion that operational emissions would be less than significant is unsupported. The comment does not address the analysis provided in Impact 4.3-2, which assesses Project-related operational impacts against SJVAPCD thresholds. As noted in the Draft EIR and in the Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum (Appendix N), the proposed Project does not result in substantial or continuous energy emissions, given that the proposed Project would generate solar energy and would not require natural-gas appliances. The County acknowledges that up to 10 emergency generators, while disclosed and discussed in the Draft EIR, were not accounted for in the Draft EIR Air Quality, Greenhouse Gas, and Energy Technical Report (Appendix C.2) emissions. To ensure emissions from these potential emergency backup generators are accounted for, the minor modification was included in the Air Quality, Greenhouse Gas Emissions, and Energy Supplemental Technical Memorandum to include the generators. The revised **Table 4.3-16:** *Estimated Annual Operational Criteria Air Pollutant Emissions—Unmitigated*, presents the annual area, mobile, and stationary source emissions associated with operation (year 2030) of the proposed Project. As shown in **Table 4.3-16:** *Estimated Annual Operational Criteria Air Pollutant Emissions—Unmitigated*, the combined annual area, mobile, and stationary source emissions remain below SJVAPCD's operational thresholds for ROG, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$. Operational criteria air pollutant emissions would also not exceed the SJVAPCD daily screening threshold as shown in **Table 4.3-17:** *Estimated Maximum Daily Operational Criteria Air Pollutant Emissions—Unmitigated*. Thus, the determination regarding operational impacts is fully supported, impacts remain less than significant, and no revisions to the mitigation measure are necessary.

Finally, the comment asserts that the Draft EIR does not sufficiently describe how the proposed mitigation measures would address air quality impacts, including cumulative impacts. However, the comment does not identify a specific impact or measure or explain why the discussion of mitigation measures is insufficient. Further, the Draft EIR explains that Mitigation Measures MM 4.3-1 through MM 4.3-7 would reduce fugitive dust emissions by implementing exhaust reduction measures and a Fugitive Dust Control Plan, and also requiring ongoing compliance with SJVAPCD rules and regulations. Exhaust reduction measures include the use of higher-tier engines, equipment maintenance, idling restrictions, and compliance with California Air Resources Board and SJVAPCD rules, which would lower pollutant emissions during construction activities. The emissions reductions associated with these measures are also described in **Tables 4.3-8** through **Table 4.3-15**, which provide estimated construction emissions with and without mitigation. Additionally, as described above in response to Comment 9-M, air pollution is largely a cumulative impact and, in accordance with SJVAPCD standards, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. As described in response to Comment 9-O, the proposed Project and cumulative projects would result in a temporary significant and unavoidable cumulative impact.

9-O

The comment states the Valley Fever Dust Management Plan must be developed prior to project approval and that the Draft EIR fails to adequately analyze the baseline risk of exposure to Valley Fever.

The County acknowledges the risk posed by the potential presence and exposure to Coccidioides immitis (CI) spores. The Draft EIR provides appropriate information regarding the baseline risk of exposure to Valley Fever in Section 4.3.2, pages 4.3-29 and 4.3-30. The Draft EIR indicates that there is a potential for workers to contract Valley Fever as a result of the proposed Project based on the anticipated earthmoving activities, describes the health effects associated with Valley Fever, and analyzes associated impacts, including the mitigation measures described below to ensure that the proposed Project would not add significantly to the existing exposure level of construction workers or nearby residences to the CI fungus. The proposed Project is required to implement Mitigation Measures MM 4.3-1 through MM 4.3-10 to proactively control and reduce fugitive dust, which would also control and minimize the potential release of CI spores.

Mitigation Measures MM 4.3-8 and MM 4.3-9 require the preparation of a Valley Fever Dust Management Plan and that training be provided to construction workers on measures they must take to proactively control and reduce fugitive dust and the potential for the release of CI spores during their ground-disturbing activities, training on specific worker/task safety procedures, and general information regarding symptoms testing and treatment options for Valley Fever. Mitigation Measure MM 4.3-8 also requires that an educational Valley Fever Training Handout be developed for distribution to workers on-site and nearby residents. This handout contains general information about the causes, symptoms, and treatment instructions regarding Valley Fever, including contact information of local health departments and clinics knowledgeable about Valley Fever. Mitigation Measure MM 4.3-8 further requires implementation of various protection measures as part of the Plan to reduce the risk of Valley Fever, including providing air filters, two-way radios for communication, N-95 masks, equipment inspection stations, phased construction to limit dust, watering prior to grading activities, and other measures. These specific and enforceable criteria are designed to reduce risks of Valley Fever. Further, Mitigation Measure MM 4.3-9 would require a one-time fee of $3,200 to be paid to the Kern County Public Health Services Department Valley Fever public

awareness programs. Additionally, the proposed Project would implement Mitigation Measure MM 4.3-1 (Fugitive Dust Control Plan) to reduce dust-related emissions generated during construction. Mitigation Measure MM 4.3-1 specifies that the Plan shall implement all measures being undertaken during construction activities and operational activities to ensure fugitive dust being blown off-site is minimized, including but not limited to the use of water trucks, soil binders, and mulch. With the implementation of fugitive dust and Valley Fever mitigation, potential project impacts would be reduced to less than significant under CEQA. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

9-P

The comment states that the Draft EIR fails to adequately analyze the environmental impact of dust suppressants. The comment includes recommendations of requirements to be incorporated into Mitigation Measures MM 4.3-8 and MM 4.3-9. However, the comment does not explain what potential impacts may result from the use of standard dust suppressants.

Mitigation Measure MM 4.3-2 identifies various measures to be incorporated into the Dust Control Plan to address Project-related emissions and dust generated during construction, including dust suppressants, such as soil binders or mulch. These are standard measures used throughout Kern County, and the County has significant experience reviewing, approving, and enforcing dust control plans. The comment indicates a preference for Los Angeles County dust control plans but does not explain why or if Los Angeles County's guidelines are more effective than Kern County's measures. Further, Mitigation Measure MM 4.3-2 and Los Angeles County's guidelines are similar in many respects, including requiring grading and construction schedules, use of dust suppressants, and compliance with applicable air district rules and regulations. Mitigation Measure MM 4.3-7 also requires a construction coordinator, similar to Los Angeles County's guidelines. No revisions to the Draft EIR are necessary.

9-Q

The comment states that the Draft EIR fails to adequately mitigate the proposed Project's impacts to agricultural resources and asserts that additional measures, including conservation easements, should be considered.

As described in the Draft EIR, proposed Project development would not adversely affect agricultural operations on surrounding and adjacent Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The proposed Project entails a use that is allowed by the Kern County Zoning Ordinance, subject to issuance of a Conditional Use Permit. With the approval of the Conditional Use Permits for the proposed Project, the proposed Project will be consistent with the County's agricultural land use and zoning designations. The proposed Project also would be subject to various measures designed to ensure that proposed Project development does not adversely impact adjacent farmland. For example, Mitigation Measure MM 4.1-4 requires that areas temporarily disturbed during construction be revegetated with native seed mix and/or native plants and also requires that native vegetation remain undisturbed unless removal is necessary for the placement and/or construction of facilities. Additionally, implementation of Mitigation Measure MM 4.2-1 would further reduce impacts by limiting the use of herbicides and minimizing potential harm to wildlife, vegetation, and water bodies. Mitigation Measure MM 4.9-1 requires the preparation and implementation of a Hazardous Materials Business Plan, which would help ensure that the proposed Project does not adversely affect agricultural operations on adjacent property resulting from improper handling of hazardous materials. Mitigation Measure MM 4.10-1 would ensure that proposed Project construction does

not affect agricultural operations on adjacent property during construction by requiring implementation of a stormwater pollution prevention plan.

Despite implementation of these and other measures, the Draft EIR concludes that impacts would remain significant because the proposed Project could contribute to or accelerate the conversion of some Prime Farmland, Unique Farmland, and Farmland of Statewide Importance within the Project site to a nonagricultural use for the life of the proposed Project. However, as provided in the Draft EIR, long-term reduction in water availability is the primary factor driving the transition of the Project site from farming to solar project development, meaning that the site would no longer be used for agriculture even if the solar development is not permitted.

The Project site overlies the Kern County Groundwater Subbasin (Subbasin), which has been identified by the Department of Water Resources as a high priority, critically over drafted basin. The Project site is also located within three water districts: Semitropic Water Storage District (SWSD), Shafter-Wasco Irrigation District's (SWID) 7th Standard Annex, and Rosedale-Rio Bravo Water Storage District. The majority of the Project site is located in an area served by the SWSD, the largest water storage district in Kern County, which overlies the Kern Subbasin and is experiencing water supply shortages. SWSD is actively planning to reduce water use, including taking active agricultural lands out of production to limit groundwater use. Like SWSD, SWID's 7th Standard Annex is heavily reliant on groundwater. Fallowing farmland within the 7th Standard Annex is a central component of SWID's plan to meet groundwater sustainability requirements. SWID is implementing a water budget that will reduce groundwater consumption from 3 AF/acre in 2025 to 0.57 AF/acre in 2040. SWSD anticipates that groundwater management will require the fallowing of between 42,880 and 58,190 acres of irrigated land by 2040.

The proposed Project will accelerate a decrease in water use in the high-priority basin that is currently critically over drafted and in need of significant reductions in pumping to achieve groundwater sustainability. Given the significant amount of land fallowing required to address groundwater deficits in the area, fallowing of the Project site would, as noted, fall within the amount of fallowing projected to occur even without Project development. Both SWSD and SWID have expressed support for the proposed Project, noting that it would allow landowners within the Project site to mitigate economic impacts of reduced water availability by repurposing lands that would otherwise be left fallow and vacant due to water scarcity. Further, landowners for a majority of the land included in the Project site have indicated agricultural operations on their land have declined and will continue to decline as they fallow land in response to current and projected reductions in water availability. These landowners have faced challenges securing enough water to allow for farming in recent years. Fallowing lands included within the Project site allows water that would have otherwise been used on the Project site to be used to support agricultural operations on other lands in the area, thereby allowing farming to continue on higher value lands.

Given SWSD's position regarding its inability to provide a long-term supply of agricultural water at current demand levels, it is not feasible for the Project site to continue agricultural production as has historically occurred on-site. Without adequate water supplies, it is unlikely the Project site would continue to be considered Prime Farmland or Farmland of Statewide Importance, which designations are the primary drivers requiring consideration of mitigation. The Department of Conservation (DOC) maps Prime Farmland and Farmland of Statewide Importance and defines these farmland categories "as lands that must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date" (DOC 2022). Without irrigated production of agriculture for a period of four years, the Project site would not meet the definition of Prime Farmland or Farmland of Statewide Importance.

Solar facilities can have a positive impact in regions where water is limited. The Project is not an indefinite and permanent conversion of agricultural land and can be viewed as an alternative use that is compatible with long-term agricultural uses, particularly where fallowing of land within the Project site will allow for continued agricultural operations elsewhere in the region by freeing up water for use on other high-value agricultural land. The proposed Project is expected to have a lifespan of 35 years, after which the site may be restored to support agricultural production if sufficient water supplies are available to support farming at that time. The development of the site for solar generating operations, with an approved decommissioning plan (Mitigation Measure MM 4.11-1), does not preclude future agricultural use at the site.

Although the proposed Project would indirectly support groundwater sustainability and provide other positive benefits, the Draft EIR recognizes that the proposed Project would convert 5,784 acres of land mapped by the DOC as Prime Farmland, approximately 670 acres of Unique Farmland, and approximately 4,128 acres of land mapped as Farmland of Statewide Importance to a nonagricultural use for at least 35 years, concluding conservatively that this conversion would constitute a significant impact to agricultural resources. Accordingly, and as explained in the Draft EIR, the County considered whether agricultural conservation easements should be imposed to mitigate for the loss of Important Farmland conversion that would occur.

CEQA requires feasible and reasonable mitigation for significant impacts. CEQA Section 15364 defines feasible to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." Agricultural conservation easements are legally recorded deed restrictions that are placed on a specific property used for agricultural production.

The County has determined that the purchase of agricultural conservation easements is not warranted. The Buttonbush Project consists of approximately 11,983 acres, with approximately 10,582 acres classified as Important Farmland. The Project site is located on less desirable farmland, as designated by the underlying landowners, and other farmland that is losing access to water. By contrast, conservation easements require the underlying land to meet various productivity factors, such as size, productivity, access to water or water rights, and soil quality. Thus, not all farmland qualifies. Easements also are not compulsory; landowners must be willing to enter into them and agree to negotiated terms. All of these factors combine to limit the number of potential and eligible acres in the area.

Requiring agricultural conservation easements for the proposed Project's impacts to over 10,000 acres of Important Farmland would significantly raise overall project costs, thereby increasing the costs of electricity produced by the proposed Project. Any such cost increase would limit the proposed Project's ability to help meet the state's renewable energy goals under SB 100 and would increase the cost of electricity to end users.

The proposed Project is not the primary or only driver of conversion of the Project site to nonagricultural uses. Instead, whether or not the proposed Project is approved, significant fallowing will be necessary within both SWSD and SWID to meet groundwater sustainability goals in the basin, and landowners within the Project site face severe water reductions due to current and future restrictions in the availability of long-term irrigation water supplies. Fallowing land within the Project site will allow those landowners to continue agricultural operations elsewhere by freeing up water for use on other high-value agricultural lands. As such, the proposed Project would contribute to meeting the County's groundwater management goals and policies. Anticipated reductions in the availability of irrigation water are also likely to

significantly constrain the availability of productive agricultural lands with a long-term, reliable source of water for which an agricultural conservation easement would be appropriate.

Given the unique circumstances described above, wherein the proposed Project would contribute to both groundwater sustainability and long-term sustained agricultural uses by freeing up water that would be used for farming elsewhere in the basin, and would provide affordable electricity to California residents, including Kern County residents, the County determined that requiring the Applicant to secure agricultural conservation easements is not warranted or desirable for this proposed Project. The County has various policies aimed at sustainable groundwater management (e.g., Section 1.10.6) and affordable electricity (e.g., Sections 5.2 and 5.4.5). The proposed Project is consistent with those policies.

The Draft EIR properly considered and analyzed the potential impacts of the proposed Project on agricultural resources, imposing all reasonable and feasible mitigation measures to address potentially significant impacts to agricultural land. Despite the implementation of various measures, the Draft EIR concluded that impacts would remain significant and unavoidable, as the proposed Project would convert farmland to a nonagricultural use for at least 35 years. However, the proposed Project is not the primary or only driver of conversion of the Project site to nonagricultural uses; rather, significant fallowing will be necessary to meet groundwater sustainability goals in the basin. The proposed Project would contribute to meeting the County's groundwater management goals and policies. The County has therefore determined that conservation easements do not constitute feasible mitigation for this proposed Project. No revisions to the Draft EIR are necessary.

9-R

This comment encompasses all the attached exhibits (Exhibits A, B, and C) that the commenter attached to this comment letter. These exhibits are data and other information used by the commenter throughout their comment letter. The comment has been noted for the record, and revisions to the Draft EIR are not necessary. The County thanks the author for their comments and participation in the public review of the environmental document.

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10: Defenders of Wildlife/California Native Plant Society

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December 30, 2025

Jack Foster
Kern County Planning and Natural Resources Department
2700 M Street, Suite 100
Bakersfield, CA 93301

Delivered via email to fosterja@kerncounty.com

Re: Draft Environmental Impact Report for the Proposed Buttonbush Solar and Storage Project; SCH No. 2024041028

Dear Mr. Foster,

Thank you for the opportunity to provide comments in response to the Draft Environmental Impact Report (DEIR) for the proposed Buttonbush Solar and Storage Project (Project). These comments are submitted on behalf of the California Native Plant Society (CNPS) and Defenders of Wildlife (Defenders).

We strongly support the development of renewable energy production. A low-carbon energy future is critical for California – for our economy, our communities, and the environment. Achieving this future—and how we achieve it—is critical for protecting California's internationally treasured biodiversity, landscapes and diverse habitats. We believe transitioning to a renewable energy future need not exacerbate the ongoing extinction crisis by thoughtfully planning projects while protecting habitat critical to species.

CNPS is a non-profit environmental organization with over 13,000 members in 35 Chapters across California and Baja California, Mexico. CNPS's mission is to protect California's native plants and their natural habitats, today and into the future, through science, education, stewardship, gardening, and advocacy. We work closely with decision-makers, scientists, and local planners to advocate for well-informed policies, regulations, and land management practices. 10-A

Defenders has 2.1 million members and supporters in the United States, 311,000 of which reside in California. Defenders is dedicated to protecting all wild animals and plants in their natural communities. To that end, Defenders employs science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions to prevent the extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

The proposed Project is a solar photovoltaic facility that would generate up to 2 GW of renewable energy and includes up to 2 GW of battery storage. The proposed Project would be sited on 11,963 acres comprised of 128 privately-owned parcels in unincorporated Kern County. It is located directly north of the community of Buttonwillow, approximately four miles west of Bakersfield, two miles west of Shafter, and seven miles southwest of Wasco. The Project site is comprised of undeveloped lands, agricultural lands, access roads and the California Aqueduct.

10-A Cont.

Comments

We offer the following comments on the DEIR for the proposed Project.

Project Objectives

One of the Project's stated objectives is to "utilize historically farmed lands that would otherwise be fallowed due to significant water shortages, thereby providing local farmers owning those lands an alternative to the economic losses associated with limiting their production." We support the use of agricultural lands that have been retired due to water constraints for renewable energy development, consistent with Defenders' *Smart from the Start* renewable energy siting framework, which identifies impaired or retired agricultural lands as potentially lower-conflict locations for utility-scale renewable energy.[1]

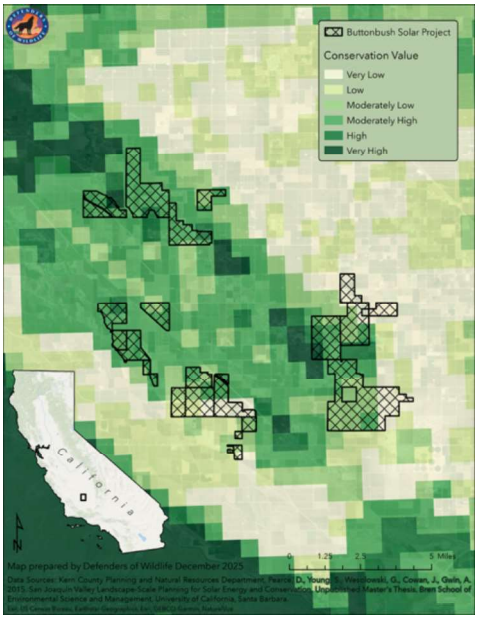
10-B

However, not all retired or fallowed agricultural lands represent low-conflict sites. As shown in Figure 1, the Project is located on lands designated as having high conservation value. This was determined through the San Joaquin Valley Least Conflict Solar Project[2], a collaborative project with multiple stakeholders. Leaders from the agricultural, conservation communities, solar PV development industry, tribes, and state and federal agencies identified this area as a "high value" area based on the presence of biological resources, as depicted by the gradient on the map.

[1] Defenders of Wildlife. *Smart From the Start: Responsible Renewable Energy Development in the Southern San Joaquin Valley*. 2012. Washington, D.C.

[2] See https://sjvp.databasin.org/pages/least-conflict/

Figure 1: Approximate Vicinity of the Proposed Project with the Environmental Conservation Value



10-B Cont.

To be truly "Smart from the Start," renewable energy siting must not only consider the use of retired agricultural lands, but also evaluate biological resources, habitat quality, connectivity and proximity to protected lands. Project objectives should explicitly recognize that preferred sites are those retired or impaired lands that also lack high-value habitat and do not pose risks to special-status species or conservation lands. We encourage the continued use of the objective to utilize retired agricultural lands for renewable energy development, but also recommend prioritizing the avoidance of high conservation value areas to minimize impacts to biological resources.

Protocol Level Surveys

The Project scoping comments submitted by the California Department of Fish and Wildlife (CDFW) recommended that species-specific protocol-level surveys be conducted to support the DEIR. However, according to the Biological Technical Report, these protocol-level surveys do not appear to have been conducted prior to the preparation of the DEIR. Instead, the analysis relies primarily on reconnaissance-level surveys, habitat assessments, burrow mapping and limited focused studies, with additional surveys deferred.

10-C

The Biological Technical Report indicates that burrow mapping surveys were conducted for multiple species simultaneously, including American badger, burrowing owl (BUOW), giant kangaroo rat, San Joaquin kit fox (SJKF), and Tipton kangaroo rat. In addition to failing to meet protocol-level survey requirements, this multi-species burrow-mapping approach is insufficient because species-specific surveys are intended to be conducted by qualified

biologists with demonstrated expertise in the focal species. Conducting surveys for numerous special-status species concurrently increases the risk of detection errors and misidentification.

This approach is inconsistent with the fundamental purpose of California Environmental Quality Act (CEQA): to inform the public and decision-makers of a project's environmental consequences before approval. Without protocol-level surveys, the DEIR cannot reliably determine whether special-status species are present, where they occur within the Project site or how Project construction and operation would impact them. As a result, the DEIR lacks the necessary factual baseline to evaluate impacts or to determine whether proposed avoidance, minimization and mitigation measures are sufficient to reduce impacts to a less-than-significant level. We request the following species-specific protocol-level surveys be performed that adhere to CDFW and/or US Fish and Wildlife Service (USFWS) guidance. Deferring protocol-level surveys until after circulation of the DEIR or until the pre-construction survey phase undermines meaningful public review and violates CEQA. 10-C Cont.

- BUOW surveys[3,4]
- Blunt-Nosed leopard lizard (BNLL)[5]
- Crotch's bumble bee surveys[6]
- SJKF surveys[7]
- Swainson's hawk (SWHA) surveys[8]

If the survey results differ from those premature conclusions made within the DEIR, then the avoidance, minimization and mitigation measures must be altered to ensure there is no significant impact to these biological resources.

Wildlife Refuges and Connectivity

The DEIR acknowledges that the Project site is located in close proximity to the Lokern Ecological Reserve and the Buttonwillow Ecological Reserve, with portions of both reserves being directly adjacent to portions of the Project site. Despite acknowledging this proximity, the DEIR fails to meaningfully analyze potential direct, indirect and cumulative impacts to these ecological reserves. 10-D

[3] California Burrowing Owl Consortium. 1993. *Burrowing Owl Survey Protocol and Mitigation Guidelines*.
[4] California Department of Fish and Game. 2012. *Staff Report on Burrowing Owl Mitigation*.
[5] California Department of Fish and Wildlife. 2019. *Approved Survey Methodology for the Blunt-Nosed Leopard Lizard*.
[6] California Department of Fish and Wildlife. 2023. *Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species*.
[7] US Fish and Wildlife Service. 2011. *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox*.
[8] Swainson's Hawk technical Advisory Committee. 2000. *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*.

CDFW specifically recommended within its scoping comments consultation with the Regional Ecological Reserve Management Unit to discuss planned ingress and egress to the Project site for the purposes of avoiding impacts on CDFW-owned lands, which is prohibited. The DEIR does not disclose whether this consultation occurred, nor does it summarize any outcomes or incorporate reserve-specific avoidance measures into the impact analysis. This omission leaves a critical gap in the DEIR's evaluation of impacts to state-managed conservation lands.

Additionally, while the DEIR notes that the Buttonwillow Ecological Reserve is mapped as an Area of Conservation Emphasis Rank 3 area, it provides no substantive analysis of how Project development may affect wildlife connectivity, specifically between the Lokern and Buttonwillow Ecological Reserves or between these reserves and other nearby protected lands. Given the Project's location relative to multiple conserved areas, the DEIR should evaluate whether the Project would impair wildlife connectivity.

We recommend that the Final EIR:

1. Include a detailed analysis of direct, indirect and cumulative impacts to the Lokern and Buttonwillow Ecological Reserves;
2. Evaluate impacts to ecological connectivity between these reserves and other protected lands in the Project vicinity; and
3. Require consultation with CDFW's Regional Ecological Reserve Management Unit on the environmental analysis.

10-D Cont.

There is also a lack of analysis for the proposed Project impacts on connectivity beyond designated reserves. While the identification and protection of ecological reserves is an important component of regional conservation planning, wildlife connectivity must be thoughtfully planned and maintained at a broader landscape scale. Effective connectivity is not limited to movement between formally designated reserves, but also depends on the protection of wildlife corridors that facilitate movement, dispersal and gene flow. Failure to consider corridors risks isolating reserves as ecological "islands," undermining their long-term conservation value. The proposed Project must explicitly identify, avoid and maintain functional connectivity across the entire project area and surrounding landscape.

Special-Status Plant Avoidance

Given the small percentage of the project site occupied by special status plant species, reductions to the project footprint (much smaller than the reductions proposed in Alternative 3) would greatly reduce or eliminate the impacts to special status plant species and the need to mitigate for these impacts. We would strongly encourage the pursuit of a project alternative that fully avoids development of any areas containing special status plant species through the elimination of planned development in the southeastern corner of site 8, portions of the southern section of site 3 and northern portions of site 2, southern portions

10-E

of site 1, the north western corner of site 4, and the elimination of the gen-tie line connecting site 4 to site 8. The gen-tie line connecting site 8 to site 4 appears to be redundant as site 4 has connections to sites 1 and 2 and site 8 is connected to site 6.

Mitigation through transplanting or reseeding to create new populations is very unlikely to be successful without ongoing maintenance and monitoring and should be avoided.[9] Additionally, lesser saltscale (*Atriplex minuscula*) has been petitioned to the California Fish and Game Commission to be listed as threatened under the California Endangered Species Act (CESA) and the species is expected to be considered for candidate status, which would extend full CESA protections to the lesser saltscale during the review process. 10-E Cont.

Deferred Mitigation and Missing Plans

Several mitigation measures in the DEIR defer the development of avoidance, minimization and mitigation measures to future plans or agency consultations and does not provide specific mitigation at the time of environmental review. For example, Mitigation Measure (MM) 4.4-11 states that if BNLL burrows are found to be occupied, measures for avoidance and minimization "shall be written" in compliance with agency recommendations, yet no such measures are identified in the DEIR. Similarly, MM 4.4-13 requires preparation of a Burrowing Owl Management Plan prior to burrow exclusion or eviction but defers the creation of it. Furthermore, MM 4.4-16 defers the establishment of avoidance, minimization and mitigation measures until the permitting phase for BUOW or SJKF. CEQA does not allow mitigation to be deferred in this manner, as it deprives the public and decision-makers of the ability to evaluate whether impacts would be reduced to a less-than-significant level.

Additionally, Draft plans for the salvage and mitigation of plant species with the potential to be impacted should be developed and included in the FEIR. We recommend the following framework for mitigation of special status plant species: 10-F

- Avoidance of impacts to special status species should be prioritized over any form of compensatory mitigation.
- Species-specific restoration plans should be developed for all special status plants with the potential to be impacted, including detailed criteria for determining the success of compensatory mitigation.
- Areas identified as potential recipient sites must be surveyed following CDFW Protocols to ensure that compensatory mitigation efforts would be suitable for target species and would not cause harmful impacts to existing botanical resources. Low conflict areas that have been degraded by previous land uses should be prioritized for restoration, leaving intact natural habitat undisturbed by restoration efforts.

[9] Fiedler, P.L., 1991. *Mitigation-related Transplantation, Relocation and Reintroduction Projects Involving Endangered and Threatened, and Rare Plant Species in California, Final Report. California*. Department of Fish & Game. Endangered Plant Program.

- While onsite mitigation is preferred, if contiguous acreage to achieve mitigation needs is not present on the project site, restoration activities may be implemented offsite.
- Maintenance and monitoring of compensatory mitigation sites should occur each year for the first five years of the mitigation term. After five years of maintenance, yearly monitoring of the site should demonstrate a self-sustaining area of occupation and population numbers with no management actions for years 6-8.
- If monitoring shows stable populations after three years (following the initial 5-year period of annual monitoring) with no maintenance, the populations should be monitored every two years in perpetuity.
- If the populations do not demonstrate stability/adherence to species specific success criteria after the initial 5-year maintenance and monitoring period, after three years without maintenance, or if subsequent monitoring shows loss or decline of populations, as determined by the required compensatory mitigation ratio, then yearly maintenance and monitoring shall be resumed for a 5-year period, again requiring that yearly monitoring show self-sustaining populations for three years post maintenance before returning to a two year, perpetual monitoring cycle.

10-F Cont.

The need for an incidental take permit from the CDFW for impacts to the lesser saltscale should be expected, and the mitigation measures for this species should clearly state that CDFW will be consulted regarding permitting and mitigation.

In addition, the DEIR lacks clearly defined compensatory mitigation requirements for several species where impacts are reasonably foreseeable. MM 4.4-12, which addresses SWHA, does not include compensatory mitigation for the permanent loss of nesting or foraging habitat, despite the well-documented importance of foraging acreage to the species' reproductive success. The absence of defined mitigation ratios, habitat performance criteria, or preservation mechanisms renders the mitigation inadequate and unenforceable.

MM 4.4-16 similarly defers mitigation for BUOW and SJKF by stating that, if impacts cannot be avoided, the project proponent will confer with CDFW and/or USFWS to determine whether take authorization is required and that any future permit may provide mitigation at a ratio "to be determined" through consultation. While agency coordination is appropriate, CEQA requires that mitigation measures be fully formulated in the DEIR itself, not postponed to a later permitting process. Deferring decisions regarding habitat mitigation ratios fails to establish a meaningful mitigation framework and improperly shifts CEQA analysis to post-approval processes.

10-G

We request that the Final EIR includes fully developed, species-specific mitigation measures and plans. Mitigation measures need to be species-specific, include explicit performance standards, maintenance and monitoring requirements, be enforceable and

include assurances for funding mitigation efforts. Without these elements, the DEIR fails to comply with CEQA's requirement for enforceable and effective mitigation. 10-G Cont.

Panel Washing and Vegetation Maintenance

MM 4.4-1a requires the lead biologist, or their designee, to be on the project site during all construction activities; however, the DEIR does not extend this requirement to Operations and Maintenance activities that may also impact special-status species. Panel washing and vegetation management occur repeatedly over the life of the Project and have the potential to disturb wildlife, degrade habitat or result in unauthorized take if conducted without biological oversight. We recommend revising MM 4.4-1a to require the lead biologist, or a qualified designee, to provide on-site monitoring during operation and maintenance activities that may affect biological resources. 10-H

Nighttime Construction

MM 4.4-2i establishes speed limits of 15 miles per hour within the Project site and 10 miles per hour during night work; however, it does not adequately address the heightened risk that nighttime construction and related activities pose to wildlife. Many special-status species are more active at night, increasing the likelihood of vehicle strikes and disturbance during nighttime operations. We recommend revising MM 4.4-2i to require avoidance of nighttime construction and related activities to the fullest extent feasible. 10-I

Special-Status Plant Pre-Construction Surveys

MM 4.4-3a should require that the Lead Biologist would conduct pre-construction special-status plant surveys at the closest time of year prior to vegetation clearing that target species would be identifiable as required in MM 4.4-4. 10-J

Road Impacts to Plant Species

MM 4.4-3c and 4.4-3d should require that access roads and parking areas avoid impacts to special status plant populations. 10-K

Survey Timing

MM 4.4-4 should include the timing of surveys for both *Atriplex* species with the potential to occur. This measure should also include requirements for the storage of salvaged topsoil to ensure that stockpiled soil is not exposed to moisture which could trigger the germination of seed prior to redistribution. 10-L

Inconsistent BUOW Buffers

MM 4.4-13 appropriately assigns buffers/setbacks around occupied burrowing owl burrows and is consistent with CDFW's *Staff Report on Burrowing Owl Mitigation Guidelines*.[10] However, MM 4.4-16 sets different buffer distances if burrowing owl burrows are identified during pre-construction surveys, specifying setbacks of 160 feet during the nonbreeding 10-M

[10] California Department of Fish and Game. 2012. *Staff Report on Burrowing Owl Mitigation*.

season and 250 feet during the breeding season. These buffer distances are inconsistent with those identified in MM 4.4-13 and create ambiguity regarding which buffer requirements would apply.

We recommend that burrowing owl buffers and setbacks be made consistent throughout the DEIR and that all applicable mitigation measures conform to CDFW's guidelines.

10-M Cont.

Table 1: Burrowing Owl Avoidance Buffers

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting Sites	April 1 – Aug 15	200 meters	500 meters	500 meters
Nesting Sites	Aug 16 – Oct 15	200 meters	200 meters	500 meters
Nesting Sites	Oct 16 – Mar 31	50 meters	100 meters	500 meters

Wildlife Friendly Fencing

MM 4.4-17 requires that permanent perimeter fencing be designed to allow passage of SJKF, their prey, and other wildlife while excluding larger predators. The measure allows for wildlife movement either through a four-inch gap at the base of chain-link fencing or through 4- to 7-inch portals. Limiting fence openings to specific portals, rather than maintaining a continuous ground-level opening, can significantly restrict movement and reduce functional connectivity for SJKF and other sensitive species. Portals concentrate wildlife movement at limited locations, increase vulnerability to predation and fail to provide consistent, site-wide permeability along the fence line.

10-N

We recommend revising MM 4.4-17 to require that the entire perimeter fence be raised four to six inches above ground level to allow free and continuous passage of SJKF throughout the Project site.

Sensitive Natural Communities

MM 4.4-21 should indicate that avoidance of impacts to sensitive natural communities should be prioritized over any impacts. The identification of the methods of mitigation and locations of mitigation sites, including surveys following CDFW Protocols to ensure that compensatory mitigation efforts would be suitable for the sensitive natural community impacted by development and would not cause harmful impacts to existing botanical resources prior to the issuance of a grading permit should be required this mitigation measure.

10-O

Conclusion

Thank you once again for the opportunity to provide comments on the DEIR for the proposed Buttonbush Solar and Storage Project and for considering our comments. We look forward to reviewing the Final EIR for the Project and requests to be notified when it is available. Please feel free to contact us with any questions. 10-P

Respectfully submitted,

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Comment 10

Defenders of Wildlife/California Native Plant Society

10-A

The comment states that comments are submitted on behalf of Defenders of Wildlife (Defenders) and the California Native Plant Society (CNPS). The comment further states that the organizations strongly support the development of renewable energy production and believe that transitioning to a renewable energy future need not exacerbate the ongoing extinction crisis by thoughtfully planning projects while protecting habitat critical to species.

This is an introductory comment and does not raise a substantive issue on the content of the Draft EIR analysis and does not directly apply to the CEQA process. No changes or modifications have been made to the Draft EIR in response to this comment.

10-B

The comment states that the organizations support the use of agricultural lands that have been retired due to water constraints for renewable energy development. The comment further states that not all retired or fallowed agricultural lands are low-conflict sites, and the Project site is located on lands designated as having "high value," as determined through the San Joaquin Valley Least Conflict Solar Project on a gradient map, based on the presence of biological resources. The comment states that renewable energy siting must also evaluate biological resources, habitat quality, connectivity, and proximity to protected lands.

The Draft EIR relies upon site-specific surveys and biological assessments prepared by professional biologists, including a BRT Acreage Memorandum, BRT, Aquatic Resources Delineation Report Acreage Memorandum, Aquatic Resources Delineation Report, and Biological Resources Habitat Assessment, which are included as appendices in Volume 4 of the Draft EIR. Biological resources evaluated in the Draft EIR include sensitive habitats, special-status plant and animal species, and potential wildlife movement corridors. As described in the Draft EIR, the potential for special-status species to occur on the Project site is based on the results of database research, biological assessments, surveys conducted on the Project site and vicinity, presence of suitable habitat, and the proximity of the Project site to previously recorded occurrences in the CNDDB, CDFW, and USFWS data. Reconnaissance and focused biological surveys were conducted from 2022 through 2024 and included special-status plant surveys, burrow mapping, a San Joaquin antelope squirrel focused survey, Swainson's hawk habitat assessment, vernal pool fairy shrimp habitat assessment, small mammal trapping, and camera studies for Buena Vista Lake ornate shrew. Burrow mapping included a habitat assessment for blunt-nosed leopard lizard, burrowing owl, San Joaquin kit fox, and American badger. Based on these comprehensive surveys and biological assessments, the Draft EIR evaluates project impacts to biological resources, including habitat quality, connectivity, and proximity to sensitive biological resources.

Section 5.4 of the proposed Project's BTR (Appendix D.2 of the Draft EIR) includes an analysis of wildlife corridors and habitat linkages. The BTR states that the Project site is not mapped as an Essential Connectivity Area (ds620; Caltrans et al. 2010), Natural Landscape Block (ds823; Caltrans et al. 2010), linkage for the California Desert Linkage Network (ds822; Penrod et al. 2012), or part of the South Coast Missing Linkages Project (ds419; South Coast Wildlands 2008). The majority of the site is mapped as an

Area of Conservation Emphasis (ACE; ds2734) Rank 1 (Limited Connectivity Opportunity) (Figure 26, Wildlife Movement, of the BTR).

In the Terrestrial Connectivity dataset developed by CDFW, ACE Rank 1 areas are defined as areas with "Limited connectivity opportunity: Areas where land use may limit options for providing connectivity (e.g., agriculture, urban) or no connectivity importance has been identified in models. Includes lakes. Some DOD lands are also in this category because they have been excluded from models due to lack of conservation opportunity, although they may provide important connectivity habitat".

The BTR acknowledges that a small northern portion of the Biological Study Area (BSA) is mapped as ACE Rank 2 (Large Natural Habitat Areas), and a small portion of the central-eastern BSA, associated with the Buttonwillow Ecological Reserve, is mapped as ACE Rank 3 (Connections with Implementation Flexibility). However, section 5.4 of the BTR includes an analysis of the impact of landscape features that fragment the area and act as major barriers to wildlife movement, including I-5 and SR-58. Section 5.4 of the BTR concludes that the project area "does not currently function as a corridor or linkage between two larger habitat blocks. In addition, the Project areas are large patches of disjunct parcels that, after development and the establishment of proposed 8-foot-high fencing around the parcels, would continue to provide agricultural and open spaces across the region for movement. Although the BSA may function as local dispersal habitat for wildlife movement and/or foraging/hunting, the proposed Project would not create a substantial impediment to wildlife movement that would warrant a wildlife corridor study".

In summary, the BTR and Draft EIR provide an adequate analysis of the Project area's terrestrial connectivity and conservation value within the region.

10-C

Commenter is requesting that additional species-specific protocol surveys adhering to recommendations from the appropriate wildlife agency are conducted for burrowing owl, blunt-nosed leopard lizard, Crotch's bumble bee, San Joaquin kit fox, and Swainson's hawk. The comment states that the Draft EIR relies upon reconnaissance-level surveys, habitat assessments, burrow mapping and limited focused studies, and improperly defers additional protocol-level surveys. The comment further states that burrow mapping surveys conducted for multiple species are insufficient because the surveying biologist may not have the requisite experience in the focal species. The comment states that protocol-level surveys are required for the Draft EIR to reliably determine whether special-status species are present, where they occur within the Project site, and how the Project would impact each species.

CEQA requires a good faith effort at disclosure and analysis to support the environmental findings. An EIR should be prepared with sufficient degree of analysis to provide decision-makers with information that enables them to make a decision which intelligently takes account of environmental consequences (CEQA Guidelines Section 15151.) An evaluation of the environmental effects of a project need not be exhaustive, but the sufficiency of an EIR is reviewed in light of what is reasonably feasible (Id.) CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commentors (CEQA Guidelines section 15204(a).)

As described in Draft EIR Section 4.4, *Biological Resources*, a comprehensive literature review was conducted by reviewing the California Natural Diversity Database (CNDDB), special-status species lists, the CNPS Rare Plant Inventory, and USFWS's Information for Planning and Consultation occurrence data. The CNDDB and CNPS databases were reviewed to identify sensitive biological resources present or

potentially present for the USGS 7.5-minute quadrangles on which the BSA is located and the 15 surrounding quadrangles. Following the literature review, reconnaissance-level surveys were conducted on November 29 and 30 and December 8, 2022, to identify existing biological resources on the site and confirm potential biological constraints. Special-status plant surveys, burrow mapping, a San Joaquin antelope squirrel (*Ammospermophilus nelsoni*) focused survey, Swainson's hawk (*Buteo swainsoni*) habitat assessment, vernal pool fairy shrimp (*Branchinecta lynchi*) habitat assessment, small mammal trapping, and camera studies for Buena Vista Lake ornate shrew (*Sorex ornatus relictus*) were also conducted in 2024. Burrow mapping included a habitat assessment for blunt-nosed leopard lizard (*Gambelia sila*), burrowing owl (*Athene cunicularia*), San Joaquin kit fox (Vulpes macrotis mutica), and American badger (*Taxidea taxus*). Additionally, habitat suitability modeling was conducted for special-status species with potential to occur on the site.

The Draft EIR concluded based on biological surveys and site-specific habitat assessments that burrowing owl, blunt-nosed leopard lizard, Crotch's bumble bee (*Bombus crotchii*), San Joaquin kit fox, and Swainson's hawk may be present on the Project site and impacted by the Project and imposes a suite of comprehensive mitigation measures to ensure that impacts to each species will be less than significant.

Burrowing Owl

Two occupied burrowing owl burrows were detected in 2024 at the Project site, at Sites 2 and 5, and additional potentially suitable burrows were observed during focused surveys in 2024. The Project site includes suitable habitat for burrowing owl. The Draft EIR determined that the Project would directly affect suitable habitat for burrowing owls and that nesting and foraging habitat containing suitable burrows would be permanently removed during Project development. The Draft EIR further determined that construction and operational activities could directly impact occupied burrows resulting in injury or mortality to individual owls and could indirectly affect owls due to increased noise, vehicle emissions, dust, introduction of invasive plant species, and other human activity. Potential impacts to burrowing owl would be reduced through implementation of Mitigation Measures MM 4.4-13, which requires burrow setbacks and pre-activity surveys for burrowing owl. Other general biological resources mitigation measures would further reduce impacts.

Stantec biologists completed a protocol-level burrowing owl survey in 2025, and a survey report is provided as Appendix O.2 of the Final EIR. Two occupied burrows were identified and mapped during the four breeding season site visits conducted in 2025. Both occupied burrows were located within more naturalized saltbrush-scrub habitat just outside of the Project boundary but within the 150-meter survey buffer. A total of 810 acres of high-potential habitat, 3,326 acres of moderate-potential habitat, 6,128 acres of low-potential habitat, and 11,140 acres of unsuitable habitat were identified.

Mitigation Measure MM 4.4-13 will be revised to include minimum mitigation ratios for impacts to occupied burrowing owl and to clarify passive relocation methods, which may require an ITP to implement.

Section, 1.11, *Summary of Environmental Impacts and Mitigation Measures*, Table 1-7, page 1-65 and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-13, page 4.4-106 and page 4.4-107.

MM 4.4-13: Burrowing Owl Burrow Setbacks. Occupied burrowing owl burrows shall not be disturbed during the species nesting season (February 1 through August 31). The following distances shall be maintained between all disturbance areas and <u>active</u> burrowing owl nesting sites <u>on site unless an ITP is obtained that allows</u>

for buffer reductions, or a qualified biologist determines a reduced buffer would be adequate to avoid disturbing the owls. If reduced buffers are established, a qualified biologist shall monitor owl behavior and shall increase buffer distance if the owls exhibit signs of disturbance or distress.

Time of Year		
April 1–Aug 15	Aug 16–Oct 15	Oct 16–Mar 31
Project Impact Level		
Low		
656 feet (200 meters)	656 feet (200 meters)	164 feet (50 meters)
Medium		
1,640 feet (500 meters)	656 feet (200 meters)	328 feet (100 meters)
High		
1,640 feet (500 meters)	1,640 feet (500 meters)	1,640 feet (500 meters)

If active burrowing owl avoidance is infeasible, then the Project proponent shall consult with CDFW regarding potential for project activities to result in take of burrowing owl and shall comply with all avoidance, minimization, and compensatory mitigation requirements set forth in any Incidental Take Permit (ITP) issued for the project by CDFW authorizing take of the species.

Burrowing owls present in proposed disturbance areas or within 500 feet or as specified under an ITP (as identified during pre-construction surveys) outside of the breeding season (between September 1 and January 31) may be moved away from the disturbance area using passive relocation techniques approved by CDFW. Passive relocation techniques in the CDFW's Staff Report on Burrowing Owl Mitigation Guidelines (CDFG 2012) include installing one-way doors in burrow entrances for 48 hours, to ensure the owl(s) have left the burrow, daily monitoring during the passive relocation period, and collapsing existing burrows to prevent reoccupation. A minimum of one or more weeks will be required to relocate the owl(s) and allow for acclimatization to alternate off-site burrows. Prior to burrow exclusion or eviction, the project proponent shall prepare a burrowing owl ~~management~~ relocation plan ~~for CDFW's review and approval~~ which shall include, at a minimum:

- Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species before burrow scoping;
- Type of scope to be used and appropriate timing of scoping to avoid impacts;
- Occupancy factors to look for and what shall 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).

- How the burrow(s) shall 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 no owls reside inside the burrow);
- Removal of other potential owl burrow surrogates or refugia on site;
- Photographing the excavation and closure of the burrow to demonstrate success and sufficiency.

Destruction of burrows shall occur only pursuant to the relocation plan ~~a CDFW-approved management plan for the species;~~ burrow excavation shall be conducted by hand whenever possible.

~~As an alternative to passive relocation, occupied burrows identified off-site within 500 feet of Project activities may be buffered with hay bales, fencing (for example, sheltering in place), or as directed by the qualified biologist (and CDFW if the species remains protected under CESA), to avoid disturbance of burrows.~~ The provisions of an ITP, if obtained, shall supersede the work restrictions in this measure.

In addition, Mitigation Measure MM 4.4-16 has been revised to remove burrowing owl, to avoid any confusion or inconsistency with Mitigation Measure MM 4.4-13.

Section, 1.11, *Summary of Environmental Impacts and Mitigation Measures*, Table 1-7, page 1-66 and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-13, page 4.4-109 and 4.4-110.

MM 4.4-16: Within 14 days prior to the start of project ground-disturbing activities, a pre-construction ~~preactivity~~ survey with a 500-foot buffer where land access is permitted shall be conducted by a qualified biologist knowledgeable in the identification of these species and approved by CDFW. Surveys need not be conducted for all areas at one time; they may be phased so that surveys occur within 14 days of the portion of the project site that will be disturbed. If dens/burrows that could support any of these species are discovered during the pre-activity survey, the avoidance buffers outlined below shall be established. No work shall occur within these buffers unless the biologist approves and monitors the activity.

~~**Burrowing Owl (Active Burrows)**~~

~~Nonbreeding season (September 1–January 31): 160 feet~~

~~Breeding season (February 1–August 31): 250 feet~~

American Badger/San Joaquin Kit Fox

Potential or atypical den: 50 feet

Known den: 100 feet

Natal or pupping den: 500 feet, unless otherwise specified by CDFW and/or USFWS

In determining whether San Joaquin kit fox activity could occur within these buffers, the biological monitor would take into account the following:

- Noise level and duration. The noise level and duration of activities would be considered. Loud (e.g., greater than 80 decibels) and sustained (e.g., longer than one hour) activities would be disallowed within the buffer setbacks. Activities with shorter durations and/or lower noise levels may be considered with continual observation of the den by the monitor and work stoppage if the biologist detects evidence of disturbance.
- Level of disturbance typically experienced in the location of the den prior to construction. Some areas of the proposed Project (e.g., existing roads or agricultural areas) have been historically subject to human disturbance and dens near these areas are assumed to be accustomed to those previous levels of disturbance. If construction noise and duration are similar to disturbances that would have occurred in the area prior to construction (e.g., vehicular traffic on an existing road), those activities could continue with ongoing monitoring of the den by a biological monitor.
- If construction activities have begun within 100 feet of a potential or atypical den that was determined during pre-construction activities to be inactive when construction began and the den becomes active during construction (i.e., becomes a "known" den), those activities would be allowed to continue at the same intensity as occurred when the den became active. A biological monitor would maintain continual watch on the den while construction activities are conducted within the buffer described above.
- In no case would construction activities, regardless of noise and duration, occur closer than 50 feet from a known or potential/atypical den or 500 feet from a natal/pupping den unless approved by California Department of Fish and Wildlife or United States Fish and Wildlife Service. Evidence that the construction activities were causing negative changes in behavior patterns would cause the biologist to disallow those activities inside the buffer.

~~If burrowing owls are detected, a Burrowing Owl Management and Relocation Plan shall be prepared by a qualified biologist and reviewed by, and implemented in consultation with, CDFW. Unless otherwise approved by CDFW, disturbance to occupied burrows shall be avoided. Disturbance to suitably sized burrows (>11 cm wide) shall be avoided during the breeding season (February 1 through August 31) unless proven to be unoccupied. Buffers shall be established around occupied burrows in accordance with guidance provided in CDFG's Staff Report on Burrowing Owl Mitigation (CDFG 2012:~~

~~or most recent guidance). No Project activities shall be allowed to encroach into established buffers without the notification to CDFW. The buffer shall remain in place until it is determined that occupied burrows have been vacated.~~

~~Outside of the nesting season (September 1 through January 31), passive owl relocation techniques as outlined in the Burrowing Owl Management and Relocation Plan shall be implemented with notification to CDFW.~~

As directed above, if the buffers cannot be implemented, the Project proponent will confer with CDFW/USFWS for guidance on appropriate take avoidance measures. If impacts to ~~burrowing owl or~~ San Joaquin kit fox cannot be feasibly avoided, the Project proponent will confer with CDFW/USFWS to determine if take authorization from CDFW/USFWS through the CESA and/or ESA ITP process or other agency-approved method is recommended. ~~If recommended, the ITP or other agency-approved permit shall provide suitable a~~Avoidance and minimization measures set forth in any ITP or other agency-approved permit issued for the project in addition to those set forth in this mitigation measure shall also be implemented. ~~to reduce potential impacts, and adequate mitigation.~~ Mitigation of occupied habitat at a ratio to be determined in consultation with the appropriate agencies may be through on- or off-site preservation with permanent protection and long-term funding, or through purchase of equivalent credits through a mitigation bank if available in addition to implementing all other measures and conditions of the permit.

Blunt-Nosed Leopard Lizard

The Draft EIR determined based on the habitat assessment and CNDDB database records that blunt-nosed leopard lizard has a moderate to high potential to occupy the areas of the Project site that contain natural open space generalized as the alkali sink and saltbrush-scrub vegetation communities. Burrow surveys identified several small mammal burrows that could be used by the species. No blunt-nosed leopard lizards were observed during the habitat assessment or incidentally during other biological surveys and mapping. The Draft EIR determined that the proposed Project could impact blunt-nosed leopard lizard during construction and operation and from permanent loss of suitable habitat. These direct and indirect impacts were determined to be potentially significant but would be reduced to less than significant through implementation of Mitigation Measures MM 4.4-11 and MM 4.4-21. Other general biological resources mitigation measures would further reduce impacts.

West Kern Environmental Consulting, LLC conducted a protocol-level blunt-nosed leopard lizard survey in 2025, and a survey report is provided in Appendix O.1 of the Final EIR. Blunt-nosed leopard lizards were not detected during the protocol survey effort. The proposed Project is not expected to adversely impact blunt-nosed leopard lizard given the survey findings.

Crotch's Bumble Bee

Crotch's bumble bee was observed flying and foraging during 2024 botanical surveys, and the Draft EIR determined that Crotch's bumble bee has a moderate potential to occur in portions of Sites 1 through 3, 5, 6, and 8 and in portions of the gen-tie route. Based on habitat modeling, the Draft EIR determined that the

proposed Project would result in the permanent loss of 493 acres of suitable habitat. The Draft EIR further determined that the proposed Project could result in potentially significant impacts to foraging/flying/nesting bumble bees but would be reduced to less than significant through implementation of Mitigation Measure MM 4.4-8 and other general biological resources mitigation measures. Mitigation Measure MM 4.4-8 requires a pre-construction survey for Crotch's bumble bee to ensure that no nests for Crotch's bumble bee are located within the construction area and provides avoidance measures and the process to acquire an ITP if necessary. There is no formal protocol-level survey for Crotch's bumble bee; however, pre-construction surveys would be performed in accordance with Survey Considerations for CESA Candidate Bumble Bee Species (CDFW 2023).

San Joaquin Kit Fox

The Draft EIR determined that the Project site contains habitat that is known to be occupied or have potential for denning and foraging by San Joaquin kit fox. Den surveys for San Joaquin kit fox were conducted on several dates in 2024. During the surveys, several burrows were identified. None were confirmed to be kit fox natal dens or active dens, and no signs or evidence of recent use by kit fox were observed. The Draft EIR determined that the proposed Project could impact individual San Joaquin kit foxes and would permanently remove suitable habitat. The Draft EIR found these impacts to be potentially significant and required implementation of Mitigation Measure MM 4.4-16 to reduce impacts to less than significant. Other general biological resources mitigation measures would further reduce impacts.

Additional scent station and camera trapping surveys were conducted at the Project site in 2025, along with pedestrian surveys in habitat modeled as moderate and high quality, and a focused survey report is provided at Appendix O.4 of the Final EIR. A total of 1,128 camera-nights of camera trapping were completed. No San Joaquin kit fox were observed on cameras or in the field. A total of 11 potential dens were identified during the pedestrian surveys that were a size that could be used by San Joaquin kit fox; none had any sign or indicators of past or present use by kit fox such as scat, tracks, prey remains, keyhole shape, etc. Based on the results of the modified protocol camera trapping surveys, pedestrian survey results, and the low to moderate habitat suitability due to intensive agricultural activity and a diminished prey base, San Joaquin kit fox is unlikely to occupy the Project site, including the 272 acres that were determined by modeling to be high quality.

Swainson's Hawk

The Draft EIR determined that isolated trees, orchards, and a small woodland area could provide suitable nesting habitat for Swainson's hawk, and the Project site contains suitable foraging habitat. A total of 33 Swainson's hawks were observed perched, foraging/hunting, or soaring over the Project site in 2024. The closest active nest record is 3.5 miles southwest of the Project site. The Draft EIR determined that the proposed Project could impact Swainson's hawk, but implementation of Mitigation Measure MM 4.4-12 would reduce impacts to less than significant. While not a significant impact for purposes of CEQA review, Mitigation Measures MM 4.4-26 and MM 4.4-27 have been incorporated to include compensatory mitigation for impacts to Swainson's hawk foraging habitat, in proportion to the species' habitat needs (i.e., home range size and habitat preferences). Specifically, conversion of foraging habitat within 1 mile of an active Swainson's hawk nest will be mitigated at a 0.5 to 1 ratio. A reduced ratio as compared to the CDFG 1994 Guidelines is appropriate for the conversion of agricultural lands within one mile of a nest due to newer information about Swainson's hawk home range size, and demonstrating that Swainson's hawks will continue to use the Project site for foraging. See the Swainson's Hawk Home Range and Habitat Literature

Review for the Buttonbush Solar and Storage Project in Appendix O.7 for more information. Other general biological resources mitigation measures would further reduce impacts.

Section 1.11, *Summary of Environmental Impacts and Mitigation Measures*; Table 1-7, page 1-55; and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-26, page 4.4-113.

MM 4.4-26: Prior to the issuance of building and grading permits for Site 6, the project proponent/operator shall mitigate for the loss of Swainson's Hawk foraging habitat for portions of the project site within one mile of an active nest at a 0.5:1 ratio for a total of 605 acres. Mitigation lands may be nested with other compensatory lands provided it meets the necessary biological requirements and as determined by the appropriate wildlife agency. Total compensatory lands may be updated based on any future protocol-level survey and in consultation with the appropriate wildlife agency.

Section 1.11, *Summary of Environmental Impacts and Mitigation Measures*; Table 1-7, Page 1-55; and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-27, Page 4.4-113.

MM 4.4-27: Prior to the issuance of building and grading permits for Site 8, the project proponent/operator shall mitigate for the loss of Swainson's Hawk foraging habitat for portions of the project site within one mile of an active nest at a 0.5:1 ratio for a total of 603 acres. Mitigation lands may be nested with other compensatory lands provided it meets the necessary biological requirements and as determined by the appropriate wildlife agency. Total compensatory lands may be updated based on any future protocol-level survey and in consultation with the appropriate wildlife agency.

As described above, the EIR's environmental baseline was based on biological surveys and site-specific habitat assessments related to species identified in the comment, and nothing more was required. Surveys completed in 2025 further substantiated the Draft EIR's 4.4-12 analysis regarding potential impacts to Swainson's hawk as detailed in a Swainson's hawk survey report in Appendix O.5 of the Final EIR.

10-D

The comment claims that the Draft EIR fails to meaningfully analyze potential direct, indirect, and cumulative impacts to the Lokern Ecological Reserve and the Buttonwillow Ecological Reserve. The comment states that it is unclear whether consultation with CDFW occurred regarding planned ingress and egress to the Project site for purposes of avoiding impacts to CDFW-owned lands and that no reserve-specific avoidance measures are incorporated into the Draft EIR. The comment states that the Draft EIR does not analyze how the proposed Project may affect wildlife connectivity, specifically between the Lokern and Buttonwillow Ecological Reserves and other nearby protected lands. Commenter requests that consultation occur with CDFW's Regional Ecological Management Unit on the environmental analysis.

The Applicant met with CDFW to discuss the proposed Project several times in 2025 (in January, March, September, November, and December), including an in-person visit in December 2025. Discussion topics have included the proximity of CDFW-managed Ecological Reserves, wildlife connectivity, and options to support CDFW's local and regional conservation efforts through land preservation to fulfill the proposed Project's anticipated mitigation obligations.

Please see the response to Comment 10-B above. The Draft EIR discusses that the Project site is in close proximity to the Buttonwillow and Lokern Ecological Reserves and evaluates biological resources within the Project site, gen-tie/collector line, and buffer areas. Buffers were evaluated to provide context for the resources within the area and address potential indirect impacts. No construction or Project activity is proposed within an Ecological Reserve.

The Draft EIR evaluates indirect impacts of the proposed Project, including impacts that could result to biological resources on nearby lands in those Reserves. The Draft EIR evaluated whether the proposed Project could interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Impact 4.4-4). Section 5.4 of the BTR (Appendix D.2 of the Draft EIR) includes an analysis of landscape-scale wildlife connectivity and project impacts to wildlife corridors and habitat linkages. Section 5.4 of the BTR states that the proposed Project areas are large patches of disjunct parcels that, after development and the establishment of proposed permeable fencing around the parcels, would continue to provide agricultural and open spaces across the region for movement. As discussed in the Draft EIR, page 4.4-116, no known or identified wildlife corridors exist within the Project site, and the Project site has not been identified as wildlife connectivity area as mapped by the California Essential Habitat Connectivity Project. Additionally, it should be noted that connectivity between the Lokern and Buttonwillow Ecological Reserves is already limited because they are separated by I-5, which is a major barrier to wildlife movement.

The Draft EIR determined that proposed Project construction, fencing, and activities have the potential to interfere with local movement of wildlife on, and adjacent to, the Project site. Although fencing would be installed, access roads and gen-tie lines would not be fenced, and no major barriers would be created that would prevent or impede wildlife movement in the region. Because the area is open and wildlife can move throughout the region unimpeded, the proposed Project would not pose a physical barrier to large-scale wildlife movement, and no major wildlife passages would be permanently reduced or eliminated by the proposed Project. Project fencing could significantly impact wildlife movement, however, and the Draft EIR requires implementation of Mitigation Measure MM 4.4-17, which provides fencing requirements to enable wildlife to move freely through the Project site, to reduce potentially significant impacts to less than significant.

No further analysis of the proposed Project's potential impacts on nearby ecological reserves or wildlife connectivity is required to satisfy CEQA's analysis and disclosure requirements.

10-E

Commenter requests consideration of an additional alternative that fully avoids portions of the Project site occupied by special-status plants. The comment further states that mitigation through transplanting or reseeding is unlikely to be successful without ongoing maintenance and monitoring and that lesser saltscale (*Atriplex minuscula*) has been petitioned to be listed as a threatened species.

CEQA Guidelines Section 15126.6(a) states (in pertinent part):

> *An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the projects, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it*

must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives that are infeasible.

The CEQA Guidelines state that factors that may be considered when determining the feasibility of alternatives are site suitability, economic vitality, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (CEQA Guidelines Section 15126.6(f)(1)).

The Draft EIR considered a reasonable range of alternatives to the proposed Project. First, the County considered and rejected a wind energy project alternative, an industrial power plant alternative, and an alternative site. The Draft EIR includes a full analysis of five additional alternatives: the No Project Alternative; a General Plan/Specific Plan and Zoning Build Out Alternative; a Reduced Acreage Alternative; a No Ground-Mounted Utility-Soar Development Alternative – Distributed Commercial and Industrial Rooftop Solar Only Alternative; and a Non-Williamson Act and Farmland Security Zone Parcels Alternative. The Reduced Acreage Alternative would reduce the Project area by approximately 40 percent, or 5,086 acres. The Non-Williamson Act and Farmland Security Zone Parcels Alternative would reduce the Project area by approximately 90 percent, including complete removal of Sites 3, 4, and 5. Both alternatives would have less impacts to biological resources as compared to the proposed Project but would still impact special-status plants. An additional alternative that considers a reduction in the acreage of Project development would be similar to the Reduced Acreage Alternative and the Non-Williamson Act and Farmland Security Zones Parcels Alternative, except that direct impacts to special-status plants might be avoided to a greater extent than would occur under either of those alternatives.

The Draft EIR includes Mitigation Measure MM 4.4-4, which requires pre-construction surveys for rare plants. If rare plants are identified, Mitigation Measure MM 4.4-4 requires a 50-foot radius and fencing to protect the plants. Only if direct impacts cannot be avoided may the Applicant undertake a salvage plan to translocate rare plants in coordination with CDFW. The salvage plan is required to include success criteria and 5 years of monitoring following salvage, and contingency measures if plant survivorship requirements are not satisfied, thus ensuring the success of any transplantation efforts that might be implemented. Additional requirements are established for Project areas mapped as occupied by Kern mallow.

The Draft EIR determined that lesser saltscale is present within the Project site and has the potential to occur throughout much of the Project site. The Draft EIR treated lesser saltscale as a special-status plant and implementation of Mitigation Measure MM 4.4-4 would be required to reduce impacts to lesser saltscale. The County has also revised the Draft EIR, p. 4.4-25, Section 4.4, *Biological Resources*, Special-Status Plant Species, as follows:

Lesser Saltscale

Lesser saltscale (*Atriplex minuscula*) is an annual herb native to California and has a CRPR status of 1B.2. <u>On August 29, 2025, a petition to list the species as threatened under CESA was submitted to the California Fish and Game Commission (Commission). The Commission has not taken action on the petition.</u> This species grows in alkaline and saline soils within chenopod scrub, playas, and valley and foothill grassland habitats, at elevations ranging from sea level to 2,950 feet. The primary threats to the lesser saltscale are urban development, agricultural conversion, and competition from invasive non-native plants. It blooms from May to October. Approximately 3,817 lesser saltscale individuals were observed during 2024 botanical surveys, all on Site 8.

In the event lesser saltscale is designated as a CESA listing candidate or otherwise receives protection from take under CESA, Mitigation Measure MM 4.4-4's requirement for the preparation of a salvage plan in consultation with CDFW would help protect against unauthorized take of the species by requiring the Project proponent to engage with CDFW to ensure all salvage work is completed in compliance with CESA. Mitigation Measure MM 4.4-4 has also been updated to clarify that if species protected by CESA cannot be avoided, an ITP from CDFW is required:

Section 1.11, *Summary of Environmental Impacts and Mitigation Measures*, Table 1-7, page 1-61 and 1-62 and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-4, and page 4.4-99 and 4.4-100.

MM 4.4-4: Prior to the start of ground-disturbance activities or decommissioning of the main project site, a qualified biologist knowledgeable on the identification of rare plant species shall conduct a pre-construction plant survey of areas of proposed disturbance within the main project site and a 100-foot buffer (where legally accessible) timed during the appropriate blooming period of the target species (all special-status plants with potential to occur at the project~~March to May for Kern mallow, and February to April for alkali sink goldfields~~) prior to start of construction activities in this area to determine if any special-status plant species are present. If special-status plants are not identified during the survey(s), no further action is required. If special-status plants are identified on-site, their locations shall be mapped and Ecologically Sensitive Area (ESA) fencing should be established at a 50-foot radius around these individuals to ensure that they are not destroyed during project construction activities. ~~Pursuant to Section 1913(c) of the California Fish and Game Code, if~~ If project activities cannot avoid direct impacts to special-status plants, CDFW shall be notified and provided the opportunity to salvage any of these plants that would be affected. The CDFW may enter into agreement with the project proponent to retain a qualified entity for the relocation of sensitive plants to an approved location. Any salvage would be undertaken in accordance with a salvage plan to be developed in consultation with CDFW. The plan would include methods for transplanting and watering (if appropriate), success criteria for salvaged plants, monitoring the health and survivorship of salvaged plants during at least 5 years following salvage, and contingency measures if plant survivorship requirements are not satisfied.

If State endangered, threatened, or rare plants, or plants protected as candidates for State listing, are identified during special-status plant surveys, the project proponent shall consult with CDFW. If take cannot be avoided, then the Project would be required to obtain an ITP from CDFW prior to implementing any Project activities that would cause take.

Prior to initiating ground-disturbing activities during the construction and decommissioning phases of the Project in areas mapped as occupied by Kern mallow, after seeds have set (usually by May 31) remove and stockpile the uppermost 3-6 inches of topsoil. The stockpiled soil shall not be exposed to moisture that could trigger the germination of seed prior to redistribution. The

> stockpiled material shall be spread in the affected area, the closest comparable area, or the closest suitable habitat outside the footprint of roads, buildings, and structures prior to the next blooming season. During the operational phase of the Project, vegetation and/or fuel management activities within Kern mallow occupied habitat shall be undertaken subsequent to after seeds of Kern mallow have set (usually by May 31). The project proponent shall mitigate for impacted occupied Kern mallow habitat. Compensatory mitigation land shall be provided at a ratio of 1:1 acre on-site or at a nearby location with comparable habitat value. Individual Kern mallow plants and/or seeds will be salvaged from the project site and translocated to the compensatory mitigation lands if authorized by appropriate wildlife agency. Final total compensation land acres will be based on final site plan design and confirmation through the required pre-construction biological surveys. Mitigation land may be nested with other lands established as compensatory mitigation for other resources, provided it meets the necessary biological requirements and as determined by appropriate wildlife agency. Prior to issuance of any building or grading permit, the project proponent shall (i) complete acquisition of such compensatory mitigation lands or equivalent mitigation credits applicable to the portion of the project covered by said grading or building permit; or (ii) provide a bond, letter of credit or other form of financial assurance acceptable to the County in an equivalent amount and acquire such lands or credits within eighteen (18) months of issuance of said building or grading permit.

Accordingly, the Draft EIR provides a legally adequate analysis of impacts to special-status plants and demonstrates that impacts would be reduced to a less-than-significant level with implementation of mitigation measures.

10-F

The comment states that Mitigation Measures MM 4.4-11, MM 4.4-13, and MM 4.4-16 in the Draft EIR improperly defer the development of avoidance, minimization, and mitigation measures to future plans or agency consultation, which the commenter argues is inconsistent with CEQA. The comment also requests that draft plans for the salvage and mitigation of plant species be included in the Final EIR and recommends a framework for mitigation of special-status plant species. The comment further requests that mitigation for lesser saltscale require consultation with CDFW. Regarding lesser saltscale, please see response to Comment 10-E.

As described in CEQA Guidelines Section 15126.4(a)(1)(B), mitigation plans need not be included in an EIR, and specific details of mitigation may be developed after project approval "provided that the agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure." (See also Save Our Capital! v. Dept. Of General Svcs. (2023) 87 Cal. App. 5th 655, 687-88 upholding mitigation measures calling for future preparation of plans and explaining that "CEQA, however, authorizes relying on a future plan as a mitigation measure so long as the lead agency commits itself to the mitigation, adopts specific

performance standards the mitigation will achieve, and identifies the types of potential actions that could feasibly achieve that performance standard.")

For further discussion regarding burrowing owls, San Joaquin kit fox, and blunt-nosed leopard lizards, please see response to Comment 10-C. Blunt-nosed leopard lizards were not detected during protocol-level surveys and are not expected to occur (West Kern Environmental Consulting LLC 2025). For blunt-nosed leopard lizard, Mitigation Measure MM 4.4-11, as provided in the Draft EIR, requires the proposed Project to consult with CDFW if blunt-nosed leopard lizard is determined to be present. The measure also requires the proposed Project to confer with CDFW to obtain an ITP if take cannot be avoided. In addition, the measure requires the Project proponent to conduct surveys for blunt-nosed leopard lizard, share the survey results with the CDFW and USFWS, develop appropriate avoidance measures, and avoid impacts if feasible.

Burrowing owls occur off-site, and Mitigation Measure MM 4.4-7 requires pre-construction surveys for burrowing owl following the current CDFW protocol (CDFW 2012). San Joaquin kit fox were not observed during the scent station and camera assay protocol, and San Joaquin kit fox is unlikely to occupy the study area due to intensive agricultural activity and diminished prey base. Mitigation Measure MM 4.4-16, as provided in the Draft EIR, requires the Project proponent to confer with CDFW/USFWS if the species is determined to be present and impacts cannot feasibly be avoided. The mitigation measure also requires the Project proponent to conduct surveys and establish avoidance buffers around San Joaquin kit fox dens.

However, additional detail has been added to the mitigation measures cited by the commenter, further describing measures that would be implemented to avoid, minimize, and mitigate impacts to special-status species and to ensure these standards have been met. Revisions to Mitigation Measure MM 4.4-11 include the following:

Section 1.11, *Summary of Environmental Impacts and Mitigation Measures*, Table 1-7, page 1-64 and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-11, and page 4.4-104 and 4.4-105.

MM 4.4-11: Within one calendar year of the start of ground-disturbance activities, a qualified biologist shall conduct protocol-level surveys for the Blunt-Nosed Leopard Lizard (BNLL) <u>in accordance with the Approved Survey Methodology for the Blunt-nosed Leopard Lizard (CDFW 2019)</u> to determine the potential for occupancy by BNLL. The required surveys shall be provided to the Kern County Planning and Natural Resources Department, the U.S Fish and Wildlife Service and the California Department of Fish and Wildlife. If no sign of the species is identified, no further action is required. If the species is identified on-site, the project proponent shall confer with the appropriate wildlife agency.

Surveys may be conducted in areas of disturbance and needed buffers as work progresses or in stages as needed during the construction phase. If surveys indicate that BNLL and appropriate burrow habitat are absent, the construction area(s) can be fenced using materials and installing temporary wildlife exclusion fencing in compliance with agency specifications to prevent potential occupancy of BNLL in active construction work areas. If BNLL are found within the survey areas, measures to protect the species shall include appropriate signage, monitoring by approved qualified biologists and consultation with the

USFWS and the CDFW to develop a BNLL avoidance plan. If burrows are found to be occupied and take authorization has not been obtained from the wildlife agencies, ~~measures for avoidance and minimization of impact to BNLL shall be written in compliance with recommendations provided during agency consultations and shall contain project specific details~~ project activities shall be paused to allow BNLL to passively leave the work area of its own volition. Project activities may resume once the BNLL has traveled a safe distance away from the work area per the discretion of the qualified biologist. If the BNLL is observed to enter a burrow, a 50-foot ground-disturbance avoidance buffer would be erected. If ground-disturbing activities shall take place within the 50-foot buffer a qualified biologist will monitor the activity. The qualified biologist will evaluate the site conditions, such as soil hardness and activity impact, and determine if the activities can take place without any impacts to BNLL. If eggs are discovered, CDFW shall be contacted within 24 hours for further guidance.

Project actions in areas where BNLL are located shall be restricted to the species active period (April to early November) to ensure that no aestivating BNLL in burrows are impacted while in their burrows. In conjunction with CDFW or other involved agencies, sensitive areas shall be established and protected with appropriate signage. If take cannot be avoided, the project proponent shall confer with the appropriate wildlife agency and obtain an Incidental Take Permit pursuant to both Section 10(a)(1) of the federal Endangered Species Act and SB 147.

10-G

The comment states that Mitigation Measure MM 4.4-12 lacks compensatory mitigation requirements for Swainson's hawk nesting and foraging habitat and, therefore, the mitigation is inadequate and enforceable. The comment asserts that Mitigation Measure MM 4.4-16 improperly defers mitigation for burrowing owl and San Joaquin kit fox by relying on future agency consultation to determine whether take authorization and mitigation ratios are required. While acknowledging the need for agency coordination, the commenter argues that CEQA requires mitigation measures to be fully formulated in the Draft EIR, including species-specific mitigation, defined ratios, performance standards, monitoring, maintenance, enforceability, and funding assurances. By postponing these decisions to the permitting phase, the commenter contends that the Draft EIR lacks a meaningful mitigation framework and does not comply with CEQA's requirements for effective and enforceable mitigation.

Regarding compensatory mitigation for impacts to Swainson's hawk foraging habitat, please see the response to Comment 1-P.

Based on 2025 protocol-level surveys, no San Joaquin kit fox were observed during the scent station and camera assay protocol, and San Joaquin kit fox is unlikely to occupy the study area due to intensive agricultural activity and diminished prey base. Additionally, two occupied burrows with burrowing owl pairs were identified off-site within 100 feet of the Project boundary based on 2025 protocol-level surveys. Therefore, pre-construction take avoidance surveys are appropriate mitigation measures for these two special-status species.

Mitigation Measure MM 4.4-16 does not impermissibly defer formulation of compensatory mitigation ratios. Where a regulatory agency like CDFW is expected to impose its own mitigation requirements through issuance of a permit, like an ITP, the details of such mitigation may be deferred where, as here, regulatory agency review and consultation regarding mitigation specifics, such as compensatory mitigation ratios, is required. (See, e.g., Rialto Citizens for Responsible Growth v. City of Rialto (2012) 208 Cal.App.4th 899, 945-46 [mitigation measure requiring consultation with USFWS regarding ESA permitting and avoidance, minimization and mitigation requirements did not impermissibly defer mitigation].) Note that mitigation requirements for burrowing owl have been consolidated in Mitigation Measure MM 4.4-13 and are no longer included in Mitigation Measure MM 4.4-16 (see response to Comment 10-C, above).

10-H

The comment states that Mitigation Measure MM 4.4-1a should be revised to require that the Lead Biologist be on-site not only during construction activities but also during operations that may impact special-status species, such as panel washing and vegetation maintenance.

As correctly noted, Mitigation Measure MM 4.4-1a requires on-site biological monitoring during construction activities, which include vegetation clearing, grading, site buildout, and decommissioning, when the potential for direct impacts to biological resources is greatest. While Mitigation Measure MM 4.4-1 does not require continuous on-site biological monitoring during routine O&M activities, it does require that a qualified Lead Biologist be retained to oversee compliance with protection measures for listed and special-status species during construction, operation, and decommissioning of the proposed Project. The combination of construction-phase monitoring, decommissioning monitoring, and mandatory worker training for all project phases provides adequate protection for special-status species and ensures that potential impacts during O&M activities would be avoided or minimized to a less-than-significant level. Therefore, no revision to Mitigation Measure MM 4.4-1 is required.

In addition, Mitigation Measure MM 4.4-2 requires the Lead Biologist to develop and implement a Worker Environmental Awareness Training Program applicable to all on-site personnel. This measure ensures that personnel involved in O&M activities are trained to identify special-status species, implement avoidance measures, inspect vehicles and equipment, and immediately notify the Lead Biologist if special-status species are encountered. Together, these measures establish a clear, enforceable framework for biological resource protection during all phases of the proposed Project, while appropriately focusing on-site monitoring on activities with the highest potential for direct impacts.

Other mitigation measures designed to reduce impacts to special-status species are required for vegetation clearance and other project activities that could impact species. For example, Mitigation Measure MM 4.4-7 requires pre-construction surveys for special-status plant and wildlife species within 14 days of initiation of ground disturbance or vegetation clearing.

10-I

The comment states that Mitigation Measure MM 4.4-2i should be revised to require avoidance of nighttime construction and related activities to the fullest extent feasible due to the increased likelihood of vehicle strikes and disturbance to wildlife at night. The referenced mitigation measure is Mitigation Measure MM 4.4-3i, not Mitigation Measure MM 4.4-2i. In response to this comment, the Draft EIR has been revised as follows:

Section, 1.11, S*ummary of Environmental Impacts and Mitigation Measures*, Table 1-7, and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-3i, page 1-61 and page 4.4-98.

MM 4.4-3: …

i A speed limit of 15 miles per hour shall be enforced within the limits of the Project site. To the extent feasible, nighttime construction-related activity shall be minimized, but if work must be conducted at night ~~If night work occurs on the project site~~, the speed limit will be 10 miles per hour.

10-J

The comment states that Mitigation Measure MM 4.4-3a should be revised to require the Lead Biologist to conduct pre-construction special-status plant species surveys at the closest time of year prior to vegetation clearing that the target species would be identifiable as required in Mitigation Measure MM 4.4-4.

As stated in Mitigation Measure MM 4.4-4, pre-construction surveys for special-status plants are required prior to ground disturbance or decommissioning activities and during the appropriate blooming periods when target species are identifiable. Requiring surveys to occur during species-specific blooming periods is consistent with accepted botanical practice and ensures accurate detection, which is the fundamental purpose of pre-construction surveys. Conducting surveys solely based on proximity in time to vegetation clearing, rather than biological detectability, would not necessarily improve survey effectiveness and could reduce reliability if surveys occur outside appropriate phenological windows.

Mitigation Measure MM 4.4-3a provides an additional opportunity to identify any special-status plants immediately before vegetation clearing or similar activities, in case they are present but had not been detected during the surveys conducted, per Mitigation Measure MM 4.4-4. Mitigation Measure MM 4.4-3a is not a replacement for a properly timed botanical survey, but rather an extra precaution.

10-K

The comment states that Mitigation Measures MM 4.4-3c and MM 4.4-3d should require that access roads and parking areas avoid impacts to special-status plant populations.

Development of access roads and parking areas would be required to comply with Mitigation Measure MM 4.4-4, which requires pre-construction surveys for rare plants and a preference for avoidance and buffer areas if rare plants are identified. See response to Comment 10-E.

In response to this comment, Mitigation Measure MM 4.4-3 on pages 4.4-97 through 4.4-99 has been revised as follows:

Section 1.11, *Summary of Environmental Impacts and Mitigation Measures*, Table 1-7, and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-3c, Page 1-61 and Page 4.4-98

MM 4.4-3: …

c. Access roads that are planned for use during construction activities shall not extend beyond the planned impact area, which area includes all previously disturbed lands and any location within the project fence line not delineated for avoidance of sensitive biological resources. Where new access routes are required, the route will be clearly marked prior to construction. Access roads will avoid impacts to special-status plant occurrences, if feasible.

d. The project proponent/operator shall minimize the areas of disturbance. Parking areas, new roads, staging, storage, excavation, and disposal site locations shall be confined to the smallest areas possible. These areas shall be demarcated, and disturbance activities, vehicles, and equipment shall be confined to these areas. Parking areas will be located to avoid impacts to special-status plant occurrences, if feasible.

10-L

The comment states that Mitigation Measure MM 4.4-4 should include timing of surveys for both Atriplex species with potential to occur and requirements for storage of salvaged topsoil to ensure that stockpiled soil is not exposed to moisture that could trigger germination of seed prior to redistribution.

Mitigation Measure MM 4.4-4 will be clarified to include that stockpiled soil is not exposed to moisture, which could trigger the germination of seed prior to redistribution. Additionally, Mitigation Measure MM 4.4-4 will be revised to incorporate recommendations from CDFW in comment letter 1. See the updates to Mitigation Measure MM 4.4-4 above, in the response to Comment 10-E.

10-M

The comment states that burrowing owl buffers required by Mitigation Measure MM 4.4-16 are inconsistent with buffers required by Mitigation Measure MM 4.4-13 and recommends that burrowing owl buffers and setbacks be made consistent and that all applicable mitigation measures conform to CDFW's guidelines.

Mitigation requirements for burrowing owl have been consolidated into Mitigation Measure 4.4-13. See the updated measure in the response to Comment 10-C above. The updated Mitigation Measure MM 4.4-13 includes buffers matching the recommendations of the CDFW 2012 guidelines. It requires buffers from active burrowing owl burrows during construction, where no work may occur unless the biologist approves and monitors the activity.

10-N

The comment states that Mitigation Measure MM 4.4-17 should be revised to eliminate the option for portals to allow wildlife movement and that raised fencing be required for all perimeter fencing.

Mitigation Measure MM 4.4-17 requires that all permanent fencing installed on the perimeter of the main Project site during operations be designed to allow passage of San Joaquin kit fox, their prey, and other wildlife, while impeding passage of larger predators, such as coyotes and similar species. Mitigation Measure MM 4.4-17 allows fencing with a 4-inch gap at the bottom or larger portals (4 to 7 inches). Alternate designs may also be constructed with documentation of coordination with CDFW and USFWS and demonstration that comments by the agencies have been considered and addressed. The County will enforce Mitigation Measure MM 4.4-17 through the MMRP process to ensure that the ultimate fence design will allow passage of San Joaquin kit fox, their prey, and other wildlife as required. No revisions are required.

10-O

The comment states that Mitigation Measure MM 4.4-21 should be revised to indicate that avoidance of impacts to sensitive natural communities should be prioritized over any impacts and to identify methods of mitigation, location of mitigation sites, and surveys following CDFW protocols.

Mitigation Measure MM 4.4-21 requires that mapped CDFW-designated sensitive communities should be avoided to the maximum extent possible, thereby indicating that avoidance of impacts is prioritized. Mitigation Measure MM 4.4-21 further requires that compensatory mitigation at a 2:1 ratio if direct impacts cannot be avoided. The commenter requests that mitigation sites be identified now, but this is not required under CEQA. An agency may defer identifying a mitigation site pending the results of further studies. (Preserve Wild Santee v. City of Santee (2012) 210 Cal.App.4th 260 (EIR need not identify exact location of off-site mitigation property)); California Native Plant Society v. City of Rancho Cordova (2009) 172 Cal.App.4th 603, 621 (mitigation measure requiring preservation and enhancement of replacement habitat did not have to identify specific mitigation site to be legally adequate). Regarding CDFW protocol surveys, refer to response to Comment 18-C.

Mitigation Measure MM-4.4-21 will be revised as follows to include additional details regarding mitigation for impacts to sensitive natural communities:

Section, 1.11, *Summary of Environmental Impacts and Mitigation Measures*, Table 1-7, page 1-67 and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-4, and page 4.4-110 and 4.4-111.

MM 4.4-21: Mapped CDFW-designated sensitive communities should be avoided to the maximum extent possible. Any CDFW-designated sensitive communities that are directly and permanently impacted shall be mitigated at a ratio of 2:1 acre on-site ~~or at a nearby location~~ at another location in the same ecoregion with comparable habitat value. Potential mitigation sites will be analyzed to identify the opportunity with the greatest chance for restoration success while minimizing the risk and uncertainty of the mitigation outcomes. An evaluation of mitigation sites includes but is not limited to: an evaluation of hydrology, soil stability, grading requirements (import/export), and existing on-site vegetation (native and non-native) communities. An evaluation of vegetation will follow CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018) and California Natural Communities List (CDFW 2023), also referred to as the Natural Communities List, based on A Manual of California Vegetation, Online Edition (CNPS 2023). Prior to the issuance of a grading permit for construction and decommissioning activities, if full avoidance of the three CDFW-designated sensitive vegetation communities is not feasible, direct impacts shall be mitigated as follows:

- Direct permanent impacts on up to 192.5 acres of bush seepweed scrub shall be mitigated at a 2:1 ratio (up to 385.0 acres, depending on final impacts)
- Direct permanent impacts on up to 0.2 acres of spinescale scrub shall be mitigated at a 2:1 ratio (up to 0.4 acres, depending on final impacts)
- Direct permanent impacts on up to 12.3 acres of tar plant fields shall be mitigated at a 2:1 ratio (up to 24.6 acres, depending on final impacts)

Impacts shall be mitigated through one or more of the following, as determined through consultation with the Kern County Planning and Natural Resources Department: preservation, restoration, enhancement, or establishment/ re-establishment.

10-P

The comment concludes the letter and the organization's request to be notified when the Final EIR is available. No changes or modifications have been made to the Draft EIR in response to this comment. CNPS and Defenders will be included on the County's notification list for the proposed Project. The County thanks the author for their comments and participation in the public review of the environmental document.

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11: Sierra Club—Kern Kaweah Chapter

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SIERRA CLUB

KERN-KAWEAH CHAPTER

P.O. Box 3357
Bakersfield, CA 93385
January 2, 2026

VIA ELECTRONIC MAIL

Kern County Planning Department
ATTN: Jack Foster, Planner II
2700 "M" Street, Suite 100
Bakersfield, CA 93301

Re: Draft EIR for the Buttonbush Solar and Storage Project by 29SC 8me, LLC. (PP24407)

Dear Planners:

The Buttonbush photovoltaic solar facility is proposed to be built on 12,785 acres of Kern County farmland parcels between Buttonwillow and Shafter. The project would generate up to 2000 megawatts of electricity with up to 2000 megawatts of energy storage, enough to power 950,000 homes.

The Sierra Club supports appropriately sited and appropriately mitigated large-scale solar projects. Replacing fossil fuel power plants with solar photovoltaic facilities, power generated from the sun, has huge air quality and climate change benefits and is sustainable as long as the sun exists. Even so, for this project there are several issues for which mitigation should be strengthened. 11-A

This developer is currently building a large-scale solar project near Boron in eastern Kern County. Construction dust from the project is causing much concern among Boron residents, particularly with the current uptick in valley fever infections. **Dust and valley fever issues** must be more thoroughly addressed in this project, and monitoring and enforcement requirements must be vigorous. 11-B

The Kern-Kaweah Chapter has long advocated mitigating for farmland loss. Much of our best farmland has been urbanized around Bakersfield and other cities. This project will take nearly 20 square miles of farmland out of agricultural production. The solar panels should be built on lower-quality farmland rather than the very best. The County 11-C

should impose appropriate requirements so that farming can continue on the most productive land; only the lower quality land should be leased for solar development.

11-C Cont.

BIOLOGICAL RESOURCES

One of the basic purposes of CEQA is to "inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities."

Post-approval biological surveys do not satisfy CEQA's informational requirements; the decision-makers need to know the results of the biological surveys in order to assess the Project's potential biological impacts BEFORE deciding whether to approve the Project. Post-approval surveys cannot inform the County's decision whether to approve the Project. To address biological resource issues **a biological survey and onsite consultation with the USFWS and CDFW should be required *before project approval***. Consultation with state and federal wildlife agencies must not be left to the developer's or the biologist's option.

11-D

If this project is approved without significant onsite input from wildlife resource agencies, neither the decision-makers nor the public will have any idea whether the project would result in significant impact on protected species and habitat. Without this information, the County cannot decide whether mitigation may be required or what mitigation measures are feasible and required. Mitigation requirements must not be deferred until after project approval unless formulating detailed mitigation measures is infeasible.

Many special-status wildlife species were determined to have the potential to occur on the proposed project site based on the presence and proximity of suitable habitat on the proposed project site and based upon historical records. These include San Joaquin kit fox, burrowing owl, Swainson's hawk, Kern mallow, heartscale, and Tipton kangaroo rat.

To help scientifically determine whether kit fox use the site, a qualified biologist should extract DNA from onsite potential San Joaquin kit fox scat samples, following a procedure published in 2014 by De Barba et al. (De Barba, M. et al. (2014). Molecular species identification for multiple carnivores. *Conservation Genetics Resources*, *6*, 821-824; and Lauer et al. (2025) Detecting the endangered San Joaquin kit fox (*Vulpes macrotis mutica*) and other canine species in Kern County, CA - Applying a non-invasive PCR-based method to four case study sites. 2025 Feb 12;5(1):8.). If the scat actually is kit fox scat, then clearly kit fox inhabit the site, and appropriate mitigation should be applied. Kit foxes mark their territory and don't leave scat behind randomly. If scat is found. It means that the kit foxes use this property for hunting and/or denning. The DEIR is flawed in not having properly evaluated and addressed the project sites' potential for special status species' habitat and the project's potential to interfere with wildlife movement.

11-E

One major concern is loss of so much habitat for special-status species like San Joaquin kit fox, heartscale, blunt-nosed leopard lizards, burrowing owls, Swainson's hawks, and many others. Other large solar projects have tried to address the issue. For example, Sequoia Riverlands Trust is working on a solar farm in the Carrizo Plains, using fencing that kit foxes and small mammals can pass through but with openings too small for predators to get in. The Maricopa Sun project has a formal conservation program with many good features including purchase of replacement habitat. The Buttonbush project should implement measures exemplified by these projects to protect and expand habitat for species of concern.

Loss of habitat is a major reason for species decline in Kern County. As area development continues to sprawl, and the surrounding habitat is permanently altered, species that once occurred in the area are increasingly becoming extirpated. Where are the kit foxes and the burrowing owls supposed to go if we remove more and more of their habitat? Without a habitat conservation plan (HCP), the County must admit the significance of cumulative impacts to biological resources and should require upfront, nondeferred viable mitigation measures for these impacts including: 11-F

- A requirement to purchase replacement habitat as under an HCP.
- A requirement to obtain an Incidental Take Permit.
- A requirement to plant trees that could serve as Swainson's hawk nesting sites.
- A requirement that the project purchase conservation easements on nearby Swainson's hawk foraging habitat.

While many plant species may have been driven out of the project site by mowing and disking operations, the EIR should require reintroducing some of the native plant species by replanting them in within project areas. 11-G

Please place the Sierra Club on the distribution list for Buttonbush Solar Project to receive any noticing of meetings, hearings, availability of documents, and to receive the environmental documents. We prefer email communications and electronic formatting of documents. Thank you for your consideration and for the opportunity to comment. 11-H

Sincerely,



Gordon L. Nipp, Ph.D.
Vice-Chair
gnipp@bak.rr.com
661-872-2432

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Comment 11

Sierra Club—Kern Kaweah Chapter

11-A

This is an introductory comment that summarizes the Buttonbush Solar and Storage Project and notes the Sierra Club's support for large solar projects. This comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

11-B

The comment states that potential dust from construction and exposure to Valley Fever is cause for concern and must be more thoroughly addressed in the analysis.

The proposed Project is required to implement Mitigation Measures MM 4.3-1 through MM 4.3-10 to reduce and mitigate impacts associated with dust and Valley Fever. In particular, Mitigation Measure MM 4.3-1 ensures compliance with applicable SJVAPCD rules and regulations, including those addressing dust. Mitigation Measure MM 4.3-2 requires the preparation of a Site-Specific Dust Control Plan to minimize fugitive dust emissions during project construction, taking into consideration grading and construction schedule, seasonal winds, site-specific wind patterns, and soil conditions to ensure adequate measures are implemented to manage fugitive dust. Mitigation Measure MM 4.3-6 requires written notice to the public through mailing a notice to all parcels within 1,000 feet of the Project site, providing information regarding the construction schedule, a telephone number, and an email address where complaints and questions can be registered. Mitigation Measure MM 4.3-7 requires the proposed Project to establish a "construction coordinator" to address dust concerns. Mitigation Measures MM 4.3-8 and MM 4.3-9 require a Valley Fever Dust Management Plan that addresses the potential presence of *Coccidioides immitis* spores and requires proper awareness training for workers and appropriate PPE. See also responses to Comments 9-O and 9-P (Western States Regional Council of Carpenters/Mitchell M. Tsai Law Firm) regarding Valley Fever and dust.

11-C

The comment expresses concern for the removal of farmland from agricultural production. The comment states that the County should impose requirements to ensure that solar projects are built on lower-quality farmland and farming can continue on the most productive land.

See response to Comment 9-Q (Western States Regional Council of Carpenters/Mitchell M. Tsai Law Firm). As provided therein, and as discussed in the Draft EIR, long-term reductions in water availability are a primary factor. The proposed Project will decrease water use in the high-priority basin that is currently critically over drafted and in need of significant reductions in pumping to achieve groundwater sustainability. Given the significant amount of land fallowing required to address groundwater deficits in the area, fallowing of the Project site would fall within the amount of fallowing projected to occur even without Project development. Both SWSD and SWID have expressed support for the proposed Project, noting that it would allow landowners within the Project site to mitigate economic impacts of reduced water availability by repurposing lands that would otherwise be left fallow and vacant due to water scarcity. Further, landowners for a majority of the land included in the Project site have indicated agricultural operations on their land have declined and will continue to decline as they fallow land in response to current

and projected reductions in water availability. These landowners have faced challenges securing enough water to allow for farming in recent years. Fallowing lands included within the Project site allows water that would have otherwise been used on the Project site to be used to support agricultural operations on other lands in the area, thereby allowing farming to continue on higher value lands.

Given the unique circumstances described above, wherein the proposed Project would contribute to both groundwater sustainability and long-term, sustained agricultural uses by freeing up water that would be used for farming elsewhere in the basin, the County determined that requiring the Applicant to secure agricultural conservation easements would potentially conflict with Kern County General Plan policies regarding groundwater management. Further, the proposed Project is not the primary or only driver of conversion of the Project site to nonagricultural uses. Regardless of whether the proposed Project is approved, significant fallowing will be necessary within both SWSD and SWID to meet groundwater sustainability goals in the basin, and landowners within the Project site face severe water reductions due to current and future restrictions in the availability of long-term irrigation water supplies. Fallowing land within the Project site will allow those landowners to continue agricultural operations elsewhere by freeing up water for use on other high-value agricultural lands. As such, the proposed Project would contribute to meeting the County's groundwater management goals and policies. Requiring agricultural conservation easements is not in concert with these policies and would instead perpetuate or prolong water-intensive agriculture in areas of the County where water use reductions are needed to ensure groundwater sustainability. Anticipated reductions in the availability of irrigation water are also likely to significantly constrain the availability of productive agricultural lands with a long-term, reliable source of water for which an agricultural conservation easement would be appropriate.

For these reasons, the use of agricultural conservation easements to mitigate project impacts is not feasible for policy reasons.

11-D

The comment states that biological surveys should be completed to inform the proposed Project's biological impacts before decision-making on the proposed Project. The comment also states that the proposed Project should consult with state and federal wildlife agencies. The comment lists some special-status wildlife species with the potential to occur on-site.

Reconnaissance and focused biological surveys were conducted from 2022 through 2024 and included plant community mapping, special-status plant surveys, burrow mapping, a San Joaquin antelope squirrel focused survey, Swainson's hawk habitat assessment, vernal pool fairy shrimp habitat assessment, small mammal trapping, and camera studies for Buena Vista Lake ornate shrew. Burrow mapping included a habitat assessment for blunt-nosed leopard lizard, burrowing owl, San Joaquin kit fox, and American badger. The specific research methodology and survey protocol data are provided in the Draft EIR Appendix D.2. Furthermore, the BTR was supplemented with additional surveys to support and refine the impact analysis. These included a vernal pool habitat assessment conducted in 2024, Buena Vista Lake ornate shrew camera studies in 2024, and small mammal trapping surveys completed in 2025. The survey methods for the small mammal trapping were approved by the wildlife agencies (see Appendix H of the BTR), and the Applicant has maintained regular coordination with both CDFW and USFWS throughout the process.

The Applicant met with USFWS and CDFW to discuss the proposed Project in January, March, and September of 2025. The Applicant provided written proposed survey methods for additional focused surveys in early 2025 for agency review and comment and conducted surveys according to project-specific

approved methods for blunt-nosed leopard lizard, San Joaquin kit fox, Buena Vista Lake ornate shrew, Tipton kangaroo rat, and giant kangaroo rat (Appendix O.1, Appendix O.3, Appendix O.4, and Appendix O.6). Focused surveys for western burrowing owl and Swainson's hawk did not require project-specific methodologies and were conducted according to published protocols in 2025.

The extensive studies were prepared to support the Draft EIR in accordance with CEQA and include the entire development envelope. The proposed Project's development footprint may be refined (reduced in some areas due to setbacks) based on final consultation with CDFW/USFWS. Further, many of the biological mitigation measures require further consultation with state or federal agencies if avoidance of protected species is not feasible, to ensure compliance with the Federal and California Endangered Species Acts. The Draft EIR also includes 25 mitigation measures addressing biological resources. No changes or modifications have been made to the Draft EIR in response to this comment.

11-E

The commenter requests that a qualified biologist extract DNA from potential San Joaquin kit fox scat samples from the Project site to determine whether the species inhabits the site.

As stated in Section 4.2, *Agricultural and Forestry Resources*, a total of 10,450 acres of the Project site were in agricultural production in 2023.

As discussed in Section 4.4, *Biological Resources*, reconnaissance and focused biological surveys for the proposed Project were conducted from 2022 through 2024 and included special-status plant surveys and burrow mapping. Burrow mapping included a habitat assessment for San Joaquin kit fox among other species. The specific research methodology and survey protocol data are provided in the Draft EIR Appendix D.2. Furthermore, the BTR was supplemented with additional surveys to support and refine the impact analysis. In 2025, the Applicant developed a project-specific focused survey plan for San Joaquin kit fox at the Project site, based on protocols outlined in USFWS's San Joaquin Kit Fox Survey Protocol for the Northern Range (USFWS 1999). DNA testing of scat is not part of the methods included in this protocol document, which is the only agency-published survey methodology for the species. The Applicant's written survey plan was provided to the USFWS and CDFW for review and comment and discussed in a teleconference in March 2025. Based on the habitat assessment, camera stations were placed in a modified survey array targeting 'low to moderate' and 'low' quality habitat associated with agricultural areas, including areas adjacent to modeled 'high' quality habitat. Pedestrian surveys for dens and other signs were conducted in high-quality habitat. No San Joaquin kit fox was detected by the cameras, and no individuals or signs were detected during the pedestrian surveys. As described in the Appendix O.4, in consideration of the negative survey results and mostly low habitat suitability due to intensive agricultural activity and a diminished prey base, San Joaquin kit fox is unlikely to occupy the Project site, including the 272 acres of modeled "high" quality habitat parcels adjacent to the Project site.

As discussed in Section 4.4-4, *Biological Resources*, various mitigation measures were developed to reduce project impacts to wildlife, including but not limited to Mitigation Measures MM 4.4-2, MM 4.4-7, MM 4.4-16, and MM 4.4-17. Mitigation Measure MM 4.4-2 requires that prior to the issuance of grading or building permits, the Lead Biologist shall develop a Worker Environmental Awareness Training Program containing life history and identification information of special-status wildlife and plant species, and that attendance by all personnel on-site is mandatory. Mitigation Measures MM 4.4-7 requires that within 14 days of the initiation of ground disturbance or vegetation clearing on, a pre-construction survey shall be conducted by a qualified biologist, for detecting potentially occurring species, such as but not limited to

San Joaquin kit fox. If special-status species are detected, appropriate buffers shall be established, as necessary. Mitigation Measures MM 4.4-16 specifies the buffer areas around dens and burrows, should said wildlife be identified, during the pre-construction survey, and requires that if impacts to San Joaquin kit fox cannot be feasibly avoided, the Project proponent will confer with CDFW/USFWS to determine if take authorization from CDFW/USFWS through the CESA and/or ESA ITP process or other agency-approved method is recommended. Furthermore, Mitigation Measure MM 4.4-17 requires that all permanent fencing installed on the perimeter of the main Project site during operations will be designed to allow for passage of San Joaquin kit fox to ensure use of the habitat under the solar panel for themselves, their prey, and other wildlife. Accordingly, the Draft EIR has appropriately determined the potential for kit fox to occur on-site and has provided robust measures to ensure any potential impacts would be less than significant. No revisions are necessary.

11-F

The comment states that the Project proponent should implement measures to protect and expand habitat for species of concern, specifically kit fox and Swainson's hawk. The comment provides examples of measures to mitigate habitat loss and species decline.

Please refer to the response to Comment 11-E and Comment 11-D regarding San Joaquin kit fox.

Per the CDFW Five-Year Status Review for Swainson's Hawk (*Buteo swainsoni*) prepared in 2016, four different studies of home range sizes documented average home ranges of 1,001 to 9,979 acres for nesting Swainson's hawks in the Central Valley (CDFW 2016). These home ranges are equivalent to circles with radii of 0.71 to 2.23 miles, as described in the Swainson's Hawk Home Range and Habitat Literature Review for the Buttonbush Solar and Storage Project, included in Appendix O.5. A recent study of four utility-scale solar energy facilities in the Central Valley found that Swainson's hawks foraged within the solar arrays, and that solar arrays were favored over some types of agricultural use (Estep 2021). Specifically, Estep's analysis found that compared to their availability in the landscape, solar arrays, alfalfa, tilled, and wheat fields were all used more often than expected, and ruderal/developed, orchard, grassland, and idle/fallow habitats were used less often than expected. Thus, conversion of agricultural lands to solar energy facilities does not result in the complete loss of foraging habitat, and it is expected that Swainson's hawk will continue to use the Project area for foraging during Project operations.

Based on the information from these studies of home range size and use of solar energy facilities, all conducted since the 1994 Guidelines were prepared, the proposed Project may result in a reduction in Swainson's hawk foraging opportunities through conversion of high-value agricultural lands in the vicinity of active nests. In response to this comment, Mitigation Measure MM 4.4-26 and MM 4.4-27 have been incorporated to include compensatory mitigation for impacts to foraging habitat, in proportion to the species' habitat needs (i.e., home range size and habitat preferences):

Section 1.11, *Summary of Environmental Impacts and Mitigation Measures*; Table 1-7, page 1-55; and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-26, page 4.4-113.

MM 4.4-26: Prior to the issuance of building and grading permits for Site 6, the Project proponent/operator shall mitigate for the loss of Swainson's Hawk foraging habitat for portions of the Project site within one mile of an active nest at a 0.5:1 ratio for a total of 605 acres. Mitigation lands may be nested with other compensatory lands provided it meets the necessary biological requirements and

as determined by the appropriate wildlife agency. Total compensatory lands may be updated based on any future protocol-level survey and in consultation with the appropriate wildlife agency.

Section 1.11, *Summary of Environmental Impacts and Mitigation Measures*; Table 1-7, page 1-55; and Section 4.4, *Biological Resources*, Mitigation Measure 4.4-27, page 4.4-113.

MM 4.4-27: Prior to the issuance of building and grading permits for Site 8, the project proponent/operator shall mitigate for the loss of Swainson's Hawk foraging habitat for portions of the project site within one mile of an active nest at a 0.5:1 ratio for a total of 603 acres. Mitigation lands may be nested with other compensatory lands provided it meets the necessary biological requirements and as determined by the appropriate wildlife agency. Total compensatory lands may be updated based on any future protocol-level survey and in consultation with the appropriate wildlife agency.

11-G

The comment states that the EIR should require reintroduction of native plant species within areas of ground disturbance related to the proposed Project.

As noted in Chapter 3, *Project Description*, and Section 4.4, *Biological Resources*, the majority of the Buttonbush Project site has been previously disturbed and continues to be disturbed from agricultural activity. Approximately 96% of the potential impacts are to land cover types that are currently disturbed (i.e., disturbed habitat, general agriculture, orchards, ornamental plantings, and urban/developed).

Additionally, Mitigation Measures MM 4.1-4, MM 4.4-5, and MM 4.4-21 address impacts related to sensitive vegetation and avoidance, along with reseeding and vegetation performance criteria. Specifically, Mitigation Measure MM 4.1-4 mandates that all native vegetation adjacent to the proposed Project boundary shall remain in place. Prior to the commencement of Project operations, the Project proponent/operator shall submit an LRRP. This Plan mandates that areas temporarily disturbed during construction and decommissioning, the ground surface shall be revegetated with a native seed mix or native plants and/or allowed to revegetate with the existing native seed bank in the topsoil, where possible to establish revegetation. The seed mix or native plants shall be determined through consultation with professionals such as landscape architect(s), horticulturist(s), botanist(s), etc., with local knowledge as shown on the submitted resume, and shall be approved by the Kern County Planning and Natural Resources Department prior to planting. Additionally, an annual evaluation report shall be submitted to the County for each of the 3 years to ensure the performance criteria are met on-site. No changes to the Draft EIR are required per this comment.

11-H

The comment requests that the Sierra Club be placed on the distribution list for the proposed Project to receive notices and communications.

The comment has been noted for the record. No changes to the Draft EIR are required per this comment. The County thanks the author for their comments and participation in the public review of the environmental document.

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12: Pacific Gas and Electric Company

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Pacific Gas and Electric Company
WE DELIVER ENERGY.SM

Danielle Wilson
Contract Senior Land Planner
Environmental Management - Transmission

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E-mail: d1wz@pge.com

December 24, 2025

Jack Foster
Kern County Planning and Natural Resources Department
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2370

Re: Kern County Draft EIR for the Buttonbush Solar and Storage Project

Mr. Foster,

Pacific Gas and Electric Company (PG&E) has reviewed the County's Draft Environmental Impact Report (DEIR) for the Buttonbush Solar and Storage Project (Project). A component of the Project involves a 500 kV, overhead gen-tie electrical transmission line originating from one or more non-PG&E substations and terminating at the PG&E Midway Substation. In support of this project, PG&E will modify the Midway Substation's 500 kV yard, install approximately two electric transmission structures, and update communication facilities within PG&E's substation property boundary. 12-A

The DEIR indicates that the actions identified above and fully described in Chapter 3, Project Description, will be adopted by Kern County through discretionary action. PG&E is an investor-owned utility regulated by the California Public Utilities Commission (CPUC) As such, PG&E's facilities are not subject to local discretionary permit requirements. The CPUC has exclusive jurisdiction over the construction, operations, and maintenance of PG&E's electric transmission facilities and its broad authority preempts all local discretionary regulation over these matters.

PG&E is not an applicant in the County's DEIR permitting process and is not subject to the County's proposed mitigation measures contained in the DEIR. Instead, the standard environmental best management practices and construction measures identified in Attachment A should be included in the CEQA document to address potential impacts associated with the PG&E scope of work. The measures can either be listed in the description of the PG&E scope of work or under the discussion of potential environmental impacts associated with the PG&E scope of work.

PG&E respectfully requests the County amend its DEIR to include the measures provide in Attachment A and include language that clarifies the regulatory framework of the PG&E activities and facilities.

Please let me know if you have any questions or wish to discuss the contents of this letter in more detail.

12-A
Cont.

Thank you,



Danielle Wilson
Contract Land Planner

Enclosures

Cc:
Wendy Nettles, Supervisor, PG&E ET - Environmental Management
Nick Stephens, PG&E Sr. Consulting Project Manager
Michael Laurienti, Avantus Development Manager

Attachment A - Buttonbush Solar and Storage Project—Pacific Gas and Electric Company (PG&E) Construction Measures (CMs) for Avoidance and Minimization at Midway Substation (Project)

Biological Resource

CM BIO-1: Worker's Environmental Awareness Program. A qualified biologist will develop an environmental awareness training program that is specific to the PG&E project related construction activities. All on-site construction personnel will attend the training before they begin work on the Project. Training will include a discussion of the construction measures that are being implemented to protect biological resources.

12-A Cont.

CM BIO-2: Vehicle Travel. Vehicles will adhere to a speed limit of 15 mph on Project-specific unpaved construction routes where no posted speed limit exists and within temporary work areas. In addition, construction and maintenance employees will be required to stay on established and clearly marked and existing roads and within the limits of disturbance except when not feasible due to physical or safety constraints and will be advised that care should be exercised when commuting to and from the Project area to reduce accidents and animal road mortality.

CM BIO-3: **Trapped Animal Prevention.** All excavated holes/trenches that are not filled at the end of a workday will be covered, or a wildlife escape ramp will be installed to prevent the inadvertent entrapment of wildlife species.

CM BIO-4: Special-Status Plants

Prior to the start of ground disturbance activities, a qualified biologist knowledgeable on the identification of rare plant species shall conduct a pre-construction plant survey of areas proposed disturbance and 100-foot buffer (where legally accessible) timed during the appropriate blooming period of the survey season immediately prior to construction to determine if any special-status plant species are present. If special-status plants (listed under ESA or CRPR 1 or 2) are identified on-site, their locations shall be mapped and avoided. Where avoidance of plants from temporary construction work activities is not feasible, work will be scheduled to occur after seed set and prior to seedling emergence and when soil is dry. When permanent ground disturbing activities cannot be avoided in known special-status plant locations, the top 4 inches of soil will be collected and retained onsite prior to disturbance and replaced in similar adjacent habitat following completion of project activities.

CM BIO-5: Blunt-Nosed Leopard Lizard

If qualified biologists determine work areas are located within suitable habitat for blunt-nosed leopard lizard (BNLL), protocol level surveys for the BNLL shall be conducted in accordance with the 2019 CDFW Approved Survey Methodology for the Blunt-Nosed Leopard Lizard no more than one year prior to initiation of work activities to determine the potential for occupancy by BNLL. The survey methods applied shall be commensurate with the anticipated level of disturbance to BNLL habitat.

Temporary work areas which do not require ground disturbance that would result in permanent habitat modification would follow the protocol "Survey for Disturbances for Maintenance Activities" which requires a total of 8-day surveys over the course of the adult active period between April 15 and July 15. A minimum of 3 survey days will be conducted consecutively, with a maximum of 6 survey days completed within any 30-day time period. Fall hatchling surveys will not be required unless conditions or anticipated construction methods change. Examples of work activities include grading existing roads or

previously disturbed areas, mowing, overland travel, and equipment staging that does not require improvements to existing conditions (pullsites, landing zones, staging areas).

A longer survey effort, "Surveys for Disturbances Leading to Habitat Removal," which includes both spring adult surveys and fall hatchling surveys, will be required for ground disturbing activities anticipated to result in permanent impacts to BNLL habitat. Examples of work activities include establishment of new roads or structures, conversion of land use, and expansion areas. Adult BNLL surveys shall be conducted for 12 days over the course of the 90-day adult optimal survey period (April 15 to July 15), with a maximum of 4 survey days per week and 8 survey days within any 30-day time period. At least one survey session should be conducted for 4 consecutive days. In addition to the 12 days of BNLL surveys required for activities in this category, 5 additional survey days are required during the hatchling optimal survey period, with at least 2 survey days conducted between August 15-30 and at least 2 survey days between September 15-30, for a total of 17 survey days overall within the same survey season/calendar year.

12-A Cont.

If BNLL are found within the survey areas during surveys, measures to protect the species shall include appropriate signage, monitoring by approved qualified biologists and avoidance of suitable and/or occupied burrows within 50-feet distance of the detection. Project actions in areas where BNLL are located shall be restricted to the species' active period (April to early November) to ensure that no aestivating BNLL in burrows are impacted while in their burrows.

CM BIO-6: San Joaquin Kit Fox and Burrowing Owl Pre-Construction Surveys
No less than 14 days and no more than 30 days prior to the start of ground disturbing activities, a qualified biologist knowledgeable in the identification of San Joaquin kit fox and burrowing owl shall conduct a pre-construction survey of areas proposed for disturbance within work areas and 500-foot buffer (where legally accessible) to determine if any special-status species are present. If, as a result of this preconstruction survey it is determined that Burrowing Owl or San Joaquin Kit Fox are present, the following measures shall be implemented:

Burrowing Owls. If signs of Burrowing Owl are identified on-site, appropriate buffers shall be established to limit construction activities that could result in take. Buffers for burrows shall be as follows:

Location	Time of Year	Level of Disturbance		
Nesting Sites	4/1-8/15	200m (Low)	500m (Med)	500m (High)
Nesting Sites	8/16-10/15	200m (Low)	500m (Med)	500m (High)
Nesting Sites	10/16-3/31	50m (Low)	100m (Med)	500m (High)

These burrowing owl active burrow buffers are drawn from CDFW's 2012 burrowing owl staff report, which specifically provides that activities may occur within them if determined on the basis of existing vegetation, human development, and land use in the area that project related activities would not result in take. If avoidance buffers are infeasible, PG&E shall develop and implement a Burrowing Owl Take Avoidance Plan.

San Joaquin Kit Fox. If active signs of San Joaquin Kit Fox are identified on-site, appropriate buffers shall be established limiting construction activities that could result in take. Buffers include (50 feet) for a potential den, (100) feet for a known den and (500) feet for a natal or pupping den. In determining whether work activity could occur within these buffers, the biological monitor would take into account the following:

- Noise level and duration. The noise level and duration of activities would be considered. Loud (e.g. greater than 80 decibels) are sustained (e.g. longer than one hour) activities would be disallowed within the buffer setbacks. Activities with shorter durations and/or lower noise levels may be considered with continual observation of the den by the monitor and work stoppage if the biologist detects evidence of disturbance.
- Level of disturbance typically experienced in the location of the den prior to construction. Some areas (e.g. existing roads or agricultural areas) have been historically subject to human disturbance and dens near these areas are assumed to be accustomed to those previous levels of disturbance. If construction noise and duration are similar to disturbances that would have occurred in the area prior to construction (e.g. vehicular traffic on an existing road), those activities could continue with ongoing monitoring of the den by a biological monitor.
- If construction activities have begun within 100-feet of a potential or atypical den that was determined during preconstruction activities to be inactive when construction began and the den becomes active during construction (i.e., becomes a "known" den), those activities would be allowed to continue at the same intensity as occurred when the den became active. A biological monitor would maintain continual watch on the den while construction activities are conducted within the buffer describe above.

If potential dens are identified that cannot be avoided, the den entrances shall be dusted, and camera stations deployed for three calendar days to register and track activity of any San Joaquin kit fox present. If no San Joaquin kit fox activity is identified after three days, the den may be removed or entrance blocked.

12-A Cont.

CM BIO-7: San Joaquin Kit Fox and Burrowing Owl Avoidance During Construction

PG&E shall observe the following measures throughout the project area to minimize impacts on San Joaquin kit fox and burrowing owl during construction:

- Artificial lighting of construction sites in the project alignment area during nighttime shall be limited to the extent feasible.
- Holes or trenches shall be inspected daily to ensure that no animal has become trapped despite covers. All holes or trenches shall be thoroughly inspected before filling.
- All pipes, culverts, or similar structures with a diameter of 4 inches or greater shall be inspected for kitfoxes before they are buried, capped, used, or moved in any way.
- All trash shall be properly disposed of and removed from the construction site at least once a week.
- No pets shall be permitted on the construction site.
- Use of rodenticides and herbicides in project areas shall be restricted.
- Plastic mono-filament matting shall not be used for erosion control or other purposes. Instead, tightly woven fiber or similar material shall be used.
- If a kit fox is trapped:
  - Personnel shall immediately report the incident to the project biologist.
  - Escape ramps or structures shall be installed immediately.
  - If the fox cannot escape, USFWS and CDFW shall be contacted for guidance.

- The project biologist shall notify USFWS and CDFW by telephone or email within 24 hours.

- If a kit fox is injured or killed:
  - Personnel shall immediately report the incident to the project biologist.
  - Project activities shall cease until USFWS and CDFW provide guidance.
  - The project biologist shall notify USFWS and CDFW immediately with the date, time, and location of the incident.

CM BIO-8: Swainson's Hawk

If ground-disturbing activities to suitable foraging or nesting habitat are anticipated to occur during the nesting season for Swainson's hawks (generally March through July), a qualified wildlife biologist will conduct preconstruction surveys within 0.50 miles of such activities that occur within or near suitable breeding habitat for nesting Swainson's hawks. The biologist will also review occurrence database records to determine if there are any known active Swainson's hawk nests or traditional territories within 0.50 miles of the work areas. If Swainson's hawk nests are identified on-site or within 0.5-miles from work areas, PG&E will prepare a Swainson's hawk nesting construction plan. The purpose of this plan would be to identify what level of monitoring would be required, what types of construction activities can occur and what locations within the project site and what avoidance setbacks need to be established, if any, to minimize impacts to an active Swainson's hawk nest.

12-A Cont.

CM BIO-9: Tipton Kangaroo Rat and San Joaquin Antelope Squirrel

Prior to the initiation of construction, a qualified biologist will conduct focused pre-construction surveys of the project work areas for San Joaquin antelope squirrel and Tipton kangaroo rat. In the unanticipated event that San Joaquin antelope squirrel or Tipton kangaroo rat are discovered on site, the following procedures shall be implemented: Tipton kangaroo rat burrows and any SJAS burrows that could be occupied shall be flagged and a 50-foot-wide buffer around the precincts shall be avoided by construction equipment and ground disturbing activities, if feasible. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (d) will be necessary to comply with CESA.

CM BIO-10: Nesting Bird Surveys and Avoidance

Wherever possible, clearing and grubbing of vegetation will be completed in the non-breeding season preceding construction. If ground-disturbing activities occur during the nesting bird season (February 1-September 15), a qualified biologist shall conduct pre-activity surveys for active nests no more than thirty days prior to the start of ground disturbance to maximize the probability that nests that could potentially be impacted are detected. Surveys shall cover a sufficient area around the work site to identify nests and determine their status. A sufficient area means any area potentially affected by a project. In addition to direct impacts (i.e. nest destruction), noise vibration, odors, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, a qualified biologist shall conduct a survey to establish a behavioral baseline of all identified nests and confirm site conditions have not changed. No disturbance buffers shall be implemented that would follow the most recent PG&E Nesting Bird Management Plan suggested buffers for avoidance.

Cultural Resources

Unexamined Areas

PG&E commissioned an archaeological study of the area for substation expansion from Dudek in 2024 (see attached map). So long as work is conducted within this surveyed area, no further survey is necessary. In the event that PG&E conducts work outside of the surveyed area, additional survey may be required. Depending on the results of the survey, additional avoidance or mitigation measures may be required.

Monitoring Near Known Resource

Site P-10-020012 is within PG&E's work area. Based upon the EIR for the Buttonbrush Solar and Storage Project, this resource is recommended not eligible for the CRHR/NRHP. As such, it need not be managed. However, PG&E will provide an archaeological monitor working under the direction of an archaeologist who meets the Secretary of the Interior standards in the event that ground-disturbing work occurs within 50 feet of the resource to ensure that no unanticipated and potentially elements are present and/or disturbed by PG&E's activities.

12-A Cont.

Unanticipated Discovery

If any new cultural resources are encountered during project activities, all work must be suspended in the vicinity (approximately 100 ft.) of the resource and Cultural Resource Specialist Matthew Armstrong shall be immediately notified by calling 559-263-5334. At that time, Mr.Armstrong will coordinate any necessary investigations of the site with appropriate specialists, as needed. PG&E may be required to implement mitigation deemed necessary for the protection of the cultural resources.

Prehistoric resources that may be identified during project implementation may include, but are not limited to, stone tools and manufacturing debris made of obsidian, basalt and other lithic materials, milling equipment such as bedrock mortars, portable mortars, and pestles and locally darkened soils (midden) that may contain dietary remains such as shell and bone, as well as human remains. Historic resources that may be identified include, but are not limited, to small cemeteries or burial plots, structural foundations, cabin pads, cans with soldered seams or tops, bottles or fragments of clear and colored glass, cut (square) nails, and ceramics.

Human Remains

Section 7050 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial. If human remains are encountered (or are suspected) during any project-related activity:

- Stop all work within 100 ft.;
- Immediately contact a PG&E Cultural Resource Specialist, who will then notify the county coroner;
- Secure location, but do not touch or remove remains and associated artifacts;
- Do not remove associated spoils or pick through them;
- Record the location and keep notes of all calls and events; and
- Treat the find as confidential and do not publicly disclose the location.

If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of such identification. The most likely descendant shall work with the CRS to

develop a program for re-interment or other disposition of the human remains and any associated artifacts. No additional work shall take place within the immediate vicinity of the find until the appropriate actions have been implemented.

12-A Cont.

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Comment 12

Pacific Gas and Electric Company

12-A

The comment states that PG&E has reviewed the proposed Project, and in support, they will modify the Midway Substation's 500 kV yard, install approximately two electric transmission structures, and update communication facilities within PG&E's substation property boundary.

The comment also states that CPUC has exclusive jurisdiction over the construction, operations, and maintenance of PG&E's electric transmission facilities, and its broad authority preempts all local discretionary regulation over these matters. Therefore, PG&E is not subjected to the Lead Agency's proposed mitigation measures contained in the Draft EIR. In response, the Lead Agency acknowledges that CPUC has exclusive jurisdiction over the PG&E facilities identified in the project description, including PG&E's proposed upgrades to the Midway Substation, communication infrastructure, and transmission line to the Point of Change or Ownership. This EIR addresses potential impacts of the proposed Project as a whole, which includes PG&E's proposed construction activities throughout the impact analysis section of each Draft EIR chapter. The Draft EIR recommends standard mitigation measures to address construction impacts while also acknowledging that PG&E already incorporates standard BMPs into its construction practices that similarly mitigate the environmental impacts of the upgrades. The proposed Midway Substation upgrades, communication infrastructure, and transmission line are minor in nature, and implementation of PG&E's BMPs is appropriate to reduce project impacts on CPUC oversight portions of the proposed Project to less-than-significant levels. The County thanks the author for their comments and participation in the public review of the environmental document.

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13: Twenty-Nine Palms Band of Mission Indians

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TWENTY-NINE PALMS BAND OF MISSION INDIANS

46-200 Harrison Place, Coachella, CA 92236. Ph. 760.863.2444. Fax: 760.863.3449

January 1, 2026

Mr. Jack Foster, Planner II
Kern County Planning and Natural Resources Department
2700 M Street, Suite 100
Bakersfield, CA 93301

RE: Draft Environmental Impact Report for the Proposed Buttonbush Solar Storage Project

Dear Mr. Foster:

This letter is regarding a consultation for CEQA and Draft Environmental Impact Report for the Proposed Buttonbush Solar Storage Project. The proposed Buttonbush Solar and Storage Project as proposed by 29SC 8me, LLC, would allow for the construction and operation of a photovoltaic (PV) solar facility with the associated infrastructure on 7 proposed project sites that would collectively generate up to 2,000 megawatts (MW) or 2 gigawatts (GW) of renewable electrical energy including a battery energy storage system (BESS) with the capacity of storing approximately 16,000 megawatt-hours (MWh) or 16 gigawatt-hours (GWh) on approximately 11,983 acres across 128 privately owned parcels in an unincorporated area of northwestern Kern County.

13-A

After reviewing the proposed project, the Twenty-Nine Palms Band of Mission Indians has determined: The project is outside of the known Chemehuevi Traditional Use Area. The other tribes who do have cultural affiliation with the project area should be contacted.

If you have any questions, please do not hesitate to contact the Tribal Historic Preservation Office at (760) 863-2480 or by email at Nicolas.Garza@29palmsbomi-nsn.gov.

Sincerely,

Nicolas Garza

Cultural Resources Specialist, Twenty-Nine Palms Band of Mission Indians

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Comment 13

Twenty-Nine Palms Band of Mission Indians

13-A

The comment states that the proposed Project is outside the known Chemehuevi Traditional Use Area, and that other tribes who do have cultural affiliation within the Project area should be contacted. Under Assembly Bill 52 and SB 18, tribes within the Project area have already been notified for tribal consultation, which has not been requested from any of the tribes. Therefore, this comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary. The County thanks the author for their comments and participation in the public review of the environmental document.

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14: Semitropic Water Storage District

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1101 Central Avenue, P.O. Box 8043, Wasco, CA 93280-9419

Telephone: (661) 758-5113 Bakersfield: (661) 327-7144
Facsimile: (661) 758-3219 E-mail: mail@semitropic.com
Website: www.semitropic.com

Kern County Planning and Natural Resources Department
2700 M Street, No. 100
Bakersfield, CA 93301

Re: Buttonbush Solar & Storage Project: DEIR

Dear Kern County Planning:

I am writing on behalf of Semitropic Water Storage District (SWSD), which serves approximately 140,000 acres of farmland in Kern County, delivering water to nearly 300 customers for irrigation. As the General Manager of the District, I am reaching out to express our support for the proposed Buttonbush Solar and Storage Project (Buttonbush Project) and to highlight the critical role this project can play in addressing both the challenges of water scarcity and the need for productive land use in our region.

Semitropic Water District, like many areas across California, is facing an ongoing water crisis. Our District is a significant contributor to agricultural production in Kern County, but water availability has been severely constrained in recent years due to prolonged drought, reduced deliveries from state and federal water systems, and increasing demands on our groundwater resources. As part of our Groundwater Sustainability Plan (GSP), the SWSD is committed to meeting sustainability goals, which include reducing water usage and managing groundwater levels to ensure a reliable future for our agricultural community. This plan necessitates the fallowing of thousands of acres of farmland in the coming years, as our water resources become increasingly scarce. 14-A

As part of the GSP, SWSD has implemented a land fallowing program aimed at reducing water consumption and achieving sustainable groundwater management. The objective of this program (Management Action) under the Semitropic GSP is to fallow between 42,880 and 58,190 acres by 2040, depending on per-acre consumptive use rates and assuming we are unable to increase access to surface water supplies. This initiative is essential to address the estimated water budget deficit of approximately 162,940 acre-feet per year.

This difficult decision is rooted in the reality that continued intensive irrigation of crops is no longer feasible given the water constraints. Recent data indicates a reduction of about 15,000 irrigated acres within SWSD since 2015, leading to a decrease in water demand by approximately 42,400 acre-feet. This trend reflects the SWSD's ongoing efforts to align agricultural practices with available water resources.

It is in this context that we strongly support the Buttonbush Project as a productive and beneficial use of land within our District. The proposed project offers a "win-win" scenario by repurposing lands that would otherwise be left fallow due to water scarcity. This transition to solar energy production aligns with our long-term goals of sustainability by reducing water demand while

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Website: www.semitropic.com

simultaneously contributing to California's renewable energy objectives. Furthermore, it offers a valuable opportunity for economic diversification in an area heavily reliant on agriculture.

The shift to utility-scale solar projects, such as Buttonbush Project, provides benefits to the local community and to Kern County at large. It would generate clean, renewable energy, create jobs, and provide additional tax revenue for the region, helping to mitigate the economic impacts of fallowing land for agricultural use. Transitioning lands from high-water-demand crops to solar energy generation will also help address the critical issue of water scarcity while offering an economically viable alternative for landowners within our district. 14-A Cont.

We respectfully urge the Kern County Planning and Natural Resources Department to approve the Buttonbush Project, which presents an opportunity to address the water crisis, support local landowners, and contribute to the long-term economic and environmental sustainability of our region.

Thank you for your consideration.

Sincerely,

Jason Gianquinto
General Manager, Semitropic Water Storage District

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Comment 14

Semitropic Water Storage District

14-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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15: Shafter-Wasco Irrigation District

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Shafter~Wasco Irrigation District

Board of Directors

CRAIG D. FULWYLER, ***President***
GEORDY W. WISE, ***Vice President***
DAVID BLOEMHOF III
BENJAMIN P. WILSON
RANDY D. BLOEMHOF

P.O. Box 1168
Wasco, California 93280
❖
Business Office: (661) 758-5153
Fax: (661) 758-6167
Water Department: (661) 758-5369

General Manager
KRIS I. LAWRENCE

Office Manager/Treasurer
SARAH K. PITTS

Legal Counsel
SCOTT K. KUNEY
ALAN F. DOUD

December 16th, 2025

Kern County Planning and Natural Resources Department
2700 M Street, Suite. 100
Bakersfield, CA 93301
Attn: Jack Foster, Planner II

Re: Buttonbush Solar & Storage Project: DEIR

To Mr. Jack Foster,

I am writing on behalf of the Shafter-Wasco Irrigation District (SWID), which services approximately 49,000 acres of land. As the General Manager of the District, I am reaching out to express our support for the proposed Buttonbush Solar and Storage Project (Buttonbush Project) and to highlight the critical role this project can play in addressing both the challenges of water scarcity and the need for productive land use in this region.

Buttonbush Solar Project is located within the 7th Standard Annex, which was previously un-districted land that was annexed into SWID in 2019 and serves approximately 9,000 acres of farmland in Kern County. The 7th Standard Annex does not share in SWID's surface water supplies, and as such it is heavily reliant on groundwater, which is insufficient to support the water consumption of the annexed area.

15-A

The Kern County groundwater basin is critically over drafted, which has put groundwater levels at risk. As part of our Groundwater Sustainability Plan (GSP), the 7th Standard Annex is committed to meeting sustainability goals, which include reducing water usage and managing groundwater levels to ensure a reliable future for our agricultural community. The hallmark of this plan is fallowing farmland. We are implementing a water budget that ramps down water consumption from 3 AF/Acre in 2025 to 0.57 AF/Acre by 2040, unless additional supplemental water is obtained on behalf of the 7th Standard Annex. This difficult decision is rooted in the reality that continued intensive irrigation of crops is no longer feasible in the 7th Standard Annex area.

In this context, we strongly support the Buttonbush Project as a productive and beneficial use of land within the 7th Standard Annex area of SWID. The proposed project offers a "win-win" scenario by repurposing lands that would otherwise be left fallow due to water scarcity. This transition to solar energy production aligns with our long-term goals of sustainability by reducing water demand while simultaneously contributing to California's renewable energy objectives.

Furthermore, it offers a valuable opportunity for economic diversification in an area heavily reliant on agriculture.

The shift to utility-scale solar projects, such as Buttonbush Project, provides benefits to the local community and to Kern County at large. It would generate clean, renewable energy, create jobs, and provide additional tax revenue for the region, helping to mitigate the economic impacts of fallowing land for agricultural use. Transitioning lands from high-water-demand crops to solar energy generation will also help address the critical issue of water scarcity while offering an economically viable alternative for landowners within our district.

15-A
Cont

We respectfully urge the Kern County Planning and Natural Resources Department to approve the Buttonbush Project, which presents an opportunity to address the water crisis, support local landowners, and contribute to the long-term economic and environmental sustainability of our region.

Please contact the District office if you have any questions.



Kris Lawrence
General Manager

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Comment 15

Shafter-Wasco Irrigation District

15-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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16: Rosedale-Rio Bravo Water Storage District

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ROSEDALE-RIO BRAVO
WATER STORAGE DISTRICT

849 Allen Road
Bakersfield, CA 93314
(661) 589-6045
www.rrbwsd.com

December 9, 2025

Kern County Planning and Natural Resources Department
2700 M Street, No. 100
Bakersfield, CA 93301

Re: Buttonbush Solar and Storage Project: DEIR

Dear Kern County Planning:

I am writing on behalf of Rosedale-Rio Bravo Water Storage District (RRBWSD), which services approximately 44,000 acres of land. As the General Manager of the District, I am reaching out to express our support for the proposed Buttonbush Solar and Storage Project (Buttonbush Project) and to highlight the critical role this project can play in addressing both the challenges of water scarcity and the need for productive land use in this region.

16-A

Rosedale-Rio Bravo Water District, like many are facing an ongoing water crisis. Our district is building a sustainable water supply to help our community thrive. Our district is a significant contributor to agricultural production in Kern County, but water availability has been severely constrained in recent years due to prolonged drought, reduced deliveries from state and federal water systems and increasing demands on our groundwater resources. As part of our Groundwater Sustainability Plan (GSP), the RRBWSD is committed to meeting sustainability goals, which include reducing water usage and managing groundwater levels to ensure a reliable future for our agricultural community. This plan necessitates the fallowing of thousands of acres of farmland in the coming years, as our water resources become increasingly scarce.

It is in this context that we strongly support the Buttonbush Project as a productive and beneficial use of land within our district. The proposed project offers a "win-win" scenario by repurposing lands that would otherwise be left fallow due to water scarcity. This transition to solar energy production aligns with our long-term goals of sustainability by reducing water demand while simultaneously contributing to

California's renewable energy objectives. Furthermore, it offers a valuable opportunity for economic diversification in an area heavily reliant on agriculture.

The shift to utility-scale solar projects, such as Buttonbush Project, provides benefits to the local community and to Kern County at large. It would generate clean, renewable energy, create jobs, and provide additional tax revenue for the region, helping to mitigate the economic impacts of fallowing land for agricultural use. Transitioning lands from high-water-demand crops to solar energy generation will also help address the critical issue of water scarcity while offering an economically viable alternative for landowners within our district.

16-A
Cont

We respectfully urge the Kern County Planning and Natural Resources Department to approve the Betton bush project, which presents an opportunity to address the water crisis, support local landowners, and contribute to the long-term economic and environmental sustainability of our region.

Thank you for your consideration.

Sincerely,

Dan Bartel, General Manager

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

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Comment 16

Rosedale-Rio Bravo Water Storage District

16-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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17: Sill Properties Inc.

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November 20, 2025

RECEIVED
DEC 02 2025
Kern County Planning &
Natural Resources Dept.

Kern County Planning and Natural Resources Department
ATTN: Jack Foster, Planner II
2700 M Street, No. 100
Bakersfield, CA 93301

Re: Support for Buttonbush Solar and Storage Project: Water Scarcity Challenges at Sill Properties Inc,

Dear Jack:

I am the manager/owner of the Sill Properties inc property, an approximately 900-acre parcel located at Shafter, CA (APN 088-180-10-00-2, 088-180-11-01-4, 088-180-12-00-8, 088-180-34-00-2, 088-180-02-00-9, 088-210-01-00-4, 088-180-07-00-4, 088-180-04-01-4. I am writing in support of the proposed Buttonbush Solar and Storage Project (Project), and to provide you with important information regarding the farming activities on the Property and the potential impact of the Project.

Our family has owned the Property for more than Four generations during which it has been used to grow products such as Almonds, Alfalfa, Corn, and Wheat. Most recently, we produced all these crops which has become increasingly challenging due to both the labor-intensive nature of farming and significant water demand. For example, in the past several years we have undertaken extensive activities like to reduce water demand for Alfalfa with buried drip irrigation, though we have increased yields and improved quality the water demand is still high. Due to the fact we only have one water source, deep wells the Project is a perfect fit for these lands. All 900 acres are considered White Lands or undistracted lands and the goal of SGMA is to retire these types of lands and find other beneficial uses. The Project is a perfect example how to reutilize these types of lands. By converting these farming land to solar we will reduce 4,350-acre feet of water per year and reduce high electrical power use during the hot summer months. This Project will allow us to allocate the resources form the project to lands that are in better water districts with two sources of water. This will enable Sill Properties, who been farming in Kern County since,1898, the ability to continue farming on lands that are more suited to grow specialty crops.

17-A

SGMA plans to significantly reduce water deliveries to farmers in Kern County and White Area lands are expected to take huge deduction in allocation of water. In the coming years water allocation will be cut significantly to these lands and will all but hinder us growing profitable crops.

Recognizing these unsustainable conditions, our family made the difficult decision fallow lands to reduce water demand for our county. We came to that decision before any discussions about leasing the land for the Project. Water scarcity, combined with increasing costs of farming made it clear that continued agricultural activity on this Property was no longer feasible.

In 2022 Avantus approached our family to discuss leasing portions of the Property for the Project. Since we had already decided to fallow some of the land, this seemed like a valuable opportunity to repurpose the Property for a productive, water-efficient use. Leasing the land for the project would also provide financial stability and allow us to continue farming.

The proposed Project offers a "win-win" for both the County and local landowners like Sill Properties. By repurposing land already slated for fallowing, the Project will contribute to California's clean energy goals while reducing water usage – a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits such as job creation and tax revenue, helping to mitigate the economic challenges associated with the expected decline in farming operations in Kern County.

17-A
Cont

For these reasons, I respectfully urge the County to approve the Buttonbush Solar and Storage Project.

Sincerely,



Bret Sill
Sill Properties inc
1508 18th Street suite 320
Bakersfield, CA 93301

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Comment 17

Sill Properties Inc.

17-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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18: Portwood Farms (Comment Letter One)

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December 22. 2024

Kern County Planning and Natural Resources Department

Attn: Lorelei Oviatt

2700 M Street

Bakersfield, CA 93301

RE: Support for Buttonbush Solar and Storage Project

Dear Lorelei Oviatt:

I am co-owner of Portwood Farms and Trustee of Philip Portwood Family Trust, which owns 700 acres that are to be part of the Buttonbush Solar and Storage Project. APN: 103-040-02. 103-040-24. 103-040-14, part of 103-040-08. 103-100-01 and 103-100-02.

My family has been farming in Kern County for more than 72 years and has owned these parcels for 36 years. These parcels are in Semitropic Water Storage District. I have been a member of the Board of Semitropic Water Storage District for 40 years. The SGMA Law will reduce the acres that can be farmed in the Semitropic Water Storage District by 30,000 acres or more. 18-A

We will have to fallow at least 700 acres for us to be sustainable. This project will allow us to transfer the water to other parcels we own and be sustainable with water.

The project will keep our 700 acres productive without any water use while continuing to pay taxes to county and water district. This helps not only us, but the County of Kern and the Semitropic Water Storage District. It also produces clean energy for years to come. Without this project the land would go out of production.

We entered into a land option and lease agreement with Avantus on June 21, 2022. This lease will provide financial stability and allow us to continue farming our other properties.

This project is a "win-win" for landowners like us, the County of Kern, Semitropic Water Storage District and all landowners in Semitropic Water Storage District.

For these reasons, I urge the County to approve the Buttonbush Solar and Storage Project.

Sincerely, Philip Portwood

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Comment 18

Portwood Farms (Comment Letter One)

18-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

19: Parsons Farms (Comment Letter One)

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March 18, 2025

RECEIVED
MAR 25 2025
Kern County Planning &
Natural Resources Dept.

Kern County Planning and Natural Resources Department
2700 M Street, No. 100
Bakersfield, CA 93301

Re: Support for Buttonbush Solar and Storage Project: Water Scarcity Challenges at Fox Ranch

To Whom it May Concern,

I am the General Partner of A.J. Parsons & Family Limited Partnership. Owner of the Fox Ranch property, an approximately 380-acre parcel located at APN 087-160-53-00-4. I am writing in support of the proposed Buttonbush Solar and Storage Project, and to provide you with important information regarding the farming activities on our property and the potential impact of the Project.

A.J. Parsons & Family Limited Partnership has owned Fox Ranch for more than 30 years, during which it has been used to grow products such as Pima Cotton, alfalfa, carrots, onions, garlic, and almonds. In 2024 we produced alfalfa, carrots and almonds which has become increasingly challenging due to both the labor-intensive nature of farming and the significant water demand. In the past decade, we have installed micro irrigation systems on 220 acres of Fox Ranch and implemented well and booster pump automation to improve irrigation efficiencies. These high-cost projects were implemented to maximize our irrigation efficiency as our availability decreases. In 2024, we used approximately 1,200 acre-feet of water to produce roughly 34.8 tons of carrots, 743,517 pounds of almonds and 804 tons of alfalfa. 19-A

Drought and reduced water deliveries have severely impacted farming operations across Kern County, and Fox Ranch is no exception. The Property receives water from Semitropic Water Storage District but is not in-contract. We do not receive a set amount annually and are at the mercy of what is available to purchase off-contract from the Water District. In recent years, we have struggled to secure the necessary amount of water to sustain farming operations.

Semitropic Water Storage District has announced plans to significantly reduce water deliveries to farmers in this region. Over the last five years, our allowable water use has dropped by roughly 62 acre-feet a year on Fox Ranch (310 acre-feet in total). In 2025, we plan to fallow 115 acres on Fox Ranch due to decrease in availability. By 2040, our allowable water use on Fox Ranch will drop from 1,660 acre-feet to 418 acre-feet. These severe water shortages will make it very difficult to continue our farming operations in the years to come.

Recognizing these unsustainable conditions and the implementation of SGMA, we made the difficult decision in 2020 to progressively take Fox Ranch out of production by 2040. We discussed the concerns for years before deciding this was the best course of action. Ultimately, moving all available water from Fox Ranch to our other properties will allow us to continue farming them. We came to that decision before any discussions about leasing the land for the

Project. Water scarcity, combined with increasing costs of farming, made it clear that continued agricultural activity on this Property was no longer feasible.

In 2022, Mike Ming approached me to discuss leasing portions of the Property for the Project to Avantus. Since we had already decided to fallow all of the land, this seemed like a valuable opportunity to repurpose the Property for a productive, water-efficient use. Leasing the land for solar development would also provide financial stability and support our efforts to continue farming on our other properties.

19-A Cont.

The proposed Project offers a "win-win" for both the County and local landowners like me. By repurposing land already slated for fallowing, the Project will contribute to California's clean energy goals while reducing water usage – a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits such as job creation and tax revenue, helping to mitigate the economic challenges associated with the expected decline in farming operations in Kern County.

For these reasons, I respectfully urge the County to approve the Buttonbush Solar and Storage Project.

Sincerely,

Julien Parsons



General Partner in AJ Parsons & Family Limited Partnership

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Comment 19

Parsons Farms (Comment Letter One)

19-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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20: Parsons Farms (Comment Letter Two)

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December 16, 2025

Electronically transmitted to: fosterja@kerncounty.com

Kern County Planning and Natural Resources Department
Attention: Mr. Jack Foster
2700 M Street, Suite 100
Bakersfield, California 93301

Dear Kern County Planning & Natural Resources Department,

I am writing to convey my strong support for the Buttonbush Solar and Storage Project (proposed by 29SC 8me LLC) and to encourage its approval by the Kern County Planning Commission and Kern County Board of Supervisors.

The Buttonbush Solar and Storage Project would construct an up to 2-gigawatt (GW) solar PV energy generating facility with up to 2 GW of battery storage. As a landowner participating in the Project, I believe that this is a beneficial use of the agricultural lands at the Project site. With the implementation of the state approved Sustainable Groundwater Management Act, the Kern County Groundwater Subbasin has been identified as critically over-drafted. The local water districts are relying on reduced irrigation on farmlands to meet water sustainability goals. The Project is a way to ensure this land is used in a productive and economically beneficial manner, and because the Project will use minimal water, the water that would have been used for crop irrigation at the Project site can be redirected to other agricultural lands. Using solar for this land will provide revenue, enhance the soil, and overall provide a means to preserve it for future generations. 20-A

The proposed Project offers a win-win scenario for the County and local landowners. By productively using land experiencing water scarcity, the Project will contribute to California's clean energy goals while reducing water usage—a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits like job creation and tax revenue, helping to soften the economic impacts of expected declines in Kern County farming operations.

Solar and storage projects like Buttonbush are essential for increasing energy supply sustainably while improving the Central Valley's air quality. Towards that end, Buttonbush will provide enough clean energy to power 950,000+ homes, day or night, while offsetting as much carbon in one year as planting 250,000 trees. This will significantly reduce regional carbon emissions by hundreds of thousands of metric tons each year and generate lasting benefits for Kern County.

In summary, there are tremendous economic, environmental, and social benefits to this project. Impacts have been minimized, and the project will implement all feasible mitigation measures required by the County. As a result, the benefits of the project far outweigh its impact and should, therefore, be approved.

Thank you for your consideration – I am very excited about the Buttonbush Solar and Storage Project and the benefit it will bring to our community and Kern County.

20-A Cont.

Sincerely,

Julien Parsons – Partner in Parsons Farms
400 Buttonwillow Drive
Buttonwillow, CA 93206

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Comment 20

Parsons Farms (Comment Letter Two)

20-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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21: Jay Kroeker

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December 16, 2025

Electronically transmitted to: fosterja@kerncounty.com

Kern County Planning and Natural Resources Department
Attention: Mr. Jack Foster
2700 M Street, Suite 100
Bakersfield, California 93301

Dear Kern County Planning & Natural Resources Department,

I am writing to convey my strong support for the Buttonbush Solar and Storage Project (proposed by 29SC 8me LLC) and to encourage its approval by the Kern County Planning Commission and Kern County Board of Supervisors.

The Buttonbush Solar and Storage Project would construct an up to 2-gigawatt (GW) solar PV energy generating facility with up to 2 GW of battery storage. As a landowner participating in the Project, I believe that this is a beneficial use of the agricultural lands at the Project site. With the implementation of the state approved Sustainable Groundwater Management Act, the Kern County Groundwater Subbasin has been identified as critically over-drafted. The local water districts are relying on reduced irrigation on farmlands to meet water sustainability goals. The Project is a way to ensure this land is used in a productive and economically beneficial manner, and because the Project will use minimal water, the water that would have been used for crop irrigation at the Project site can be redirected to other agricultural lands. Using solar for this land will provide revenue, enhance the soil, and overall provide a means to preserve it for future generations. 21-A

The proposed Project offers a win-win scenario for the County and local landowners. By productively using land experiencing water scarcity, the Project will contribute to California's clean energy goals while reducing water usage—a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits like job creation and tax revenue, helping to soften the economic impacts of expected declines in Kern County farming operations.

Solar and storage projects like Buttonbush are essential for increasing energy supply sustainably while improving the Central Valley's air quality. Towards that end, Buttonbush will provide enough clean energy to power 950,000+ homes, day or night, while offsetting as much carbon in one year as planting 250,000 trees. This will significantly reduce regional carbon emissions by hundreds of thousands of metric tons each year and generate lasting benefits for Kern County.

In summary, there are tremendous economic, environmental, and social benefits to this project. Impacts have been minimized, and the project will implement all feasible mitigation measures required by the County. As a result, the benefits of the project far outweigh its impact and should, therefore, be approved.

Thank you for your consideration – I am very excited about the Buttonbush Solar and Storage Project and the benefit it will bring to our community and Kern County.

21-A Cont.

Sincerely,



Jay Kroeker
P.O. Box 1537
Shafter, CA 93263

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Comment 21

Jay Kroeker

21-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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22: Alan Bittleston (Comment Letter One)

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Allan Bittleston
7210 Meadowbrook Lane
Bakersfield, CA 93309
abtailspin@gmail.com
(661)331-1314

March 27, 2025

Kern County Planning and Natural Resources Department
2700 M Street, No. 100
Bakersfield, CA 93301

Subject: Support for Buttonbush Solar Project – APN 100-020-19-00-1

To Whom it May Concern,

I am writing to show support of the Buttonbush Solar project. I own 134.59 acres on a 219.87-acre parcel (APN 100-020-19-00-1) located on Snow Road in Buttonwillow, CA that I hope to be able to include in this project. Due to prolonged and severe drought conditions in the area, the land is no longer viable for agricultural use. Our farm relies entirely on well water sourced from an underground aquifer, and with the implementation of recent water restrictions, it has become impossible to sustain agricultural production across the entire parcel. 22-A

Given these constraints, the Buttonbush Solar and Storage Project, which offers significant environmental and economic benefits to Kern County and the state of California, would not only ensure myself the continued productive use of the land but would also contribute to the state's renewable energy goals and mitigate the impacts of climate change.

By approving this project, Kern County would enable the conservation of a substantial volume of groundwater. Traditional farming operations in this region can require over 3-acre-feet of water per acre annually. By converting 134.59 acres to solar energy production, we estimate saving over 400 acre-feet of water per year, a critical conservation effort given the current water crisis.

Furthermore, the Buttonbush Solar and Storage Project will provide economic benefits to the local community, including job creation during construction and ongoing maintenance, increased tax revenue, and improved energy resilience. The development of this solar project will also allow my land to serve a sustainable and productive purpose while alleviating the burden of water scarcity.

We respectfully request the Board's approval of this project. Please feel free to contact me at (661)331-1314 or abtailspin@gmail.com should you require additional information.

Sincerely,

Allan Bittleston
7210 Meadowbrook Lane
Bakersfield, CA 93309
abtailspin@gmail.com
(661)331-1314

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Comment 22

Alan Bittleston (Comment Letter One)

22-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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23: Tom Toretta (Comment Letter One)

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December 27, 2024

Kern County Planning and Natural Resources Department
Attn: Lorelei Oviatt
2700 M Street, No. 100
Bakersfield, CA 93301

Re: Support for Buttonbush Solar and Storage Project: Water Scarcity Challenges at Toretta LTD 1

Dear Ms. Oviatt,

I am the owner/partner of the Toretta LTD 1 property, an approximately 240-acre parcel located on Wasco Way in Buttonwillow, Ca (APN 100-100-03-01-6, 100-100-04, 100-100-05-01-2, 100-100-06-01-5). I am writing in support of the proposed Buttonbush Solar and Storage Project and to provide you with important information regarding the farming activities on the Property and the potential impact of the Project.

My family (I'm the third generation and my sons will be the fourth) has owned the Property for more than 50 years, during which time it has been used to grow products such as almonds and various row crops. Most recently, we produced almonds which has become increasingly challenging due to both the labor-intensive nature of farming and significant water demand. For example, in the past 5 years we have had to fallow 80 acres of the 240 since I have not been receiving a good portion of the water I have contracted to buy from the state. This has become a financial burden, as we are required to pay for 100% of our contract water even if we do not receive a 100%. To mitigate the loss of this water I am forced to pump ground water, which is becoming increasingly limited due to SGMA ground water regulations. I will not be able to sustain this property on ground water alone. Property taxes are an additional burden, they are not waived if I am forced to fallow land due to a lack of water. Almonds are a fairly water intensive crop using 3.5 to 3.75 feet per acre annually, this is not going to be sustainable going forward for our family farm

23-A

Drought and reduced water deliveries have severely impacted farming operations across Kern County, and our property is no exception. The Property receives surface water from Semitropic Water Storage District but, in recent years we have been unable to secure the necessary amount of water to sustain farming operations due to decreased deliveries from the State Water Project.

Semitropic will be forced to significantly reduce water deliveries to farmers in this region. By 2040 Semitropic will reduce groundwater pumping to .5 feet per acre to comply with SGMA. This reduced pumping allowance combined with unreliable state water supply deliveries will lead to the fallowing of a significant acres in Semitropic, including ours. These severe water shortages will make it very difficult to continue our farming operations in the years to come. Not only will this be an extreme financial burden on our company, but it will also affect my employees and their families, some of whom will have to be laid off. It will also affect the ancillary businesses that rely on agriculture to support their businesses and families.

Recognizing these unsustainable conditions, our family made the difficult decision in 2020 to take all the Property out of production by 2030. We came to that decision before any discussions about leasing the land for the solar project. Water scarcity, combined with increasing costs of farming made it clear that continued agricultural activity on this property was no longer feasible.

In early 2022 I approached Avantus to discuss leasing the Property for the solar project. Since we had already decided to fallow all the land, this seemed like a valuable opportunity to repurpose the Property for a productive, water-efficient use. Leasing the land for solar development would also provide financial stability and allow us to keep our property and provide us with a positive source of income to invest in our other properties or new business opportunities.

23-A Cont.

The proposed Project offers a "win-win" for both the County and local landowners like us. By repurposing land already slated for fallowing, the Project will contribute to California's clean energy goals while reducing water usage – a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits such as job creation and tax revenue, helping to mitigate the economic challenges associated with the expected decline in farming operations in Kern County.

For these reasons, we respectfully urge the County to approve the Buttonbush Solar and Storage Project.

Sincerely,

Tom Toretta

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Comment 23

Tom Toretta (Comment Letter One)

23-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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24: Tom Toretta (Comment Letter Two)

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December 22, 2025

Electronically transmitted to: fosterja@kerncounty.com

Kern County Planning and Natural Resources Department
Attention: Mr. Jack Foster
2700 M Street, Suite 100
Bakersfield, California 93301

Dear Kern County Planning & Natural Resources Department,

I am writing to convey my strong support for the Buttonbush Solar and Storage Project (proposed by 29SC 8me LLC) and to encourage its approval by the Kern County Planning Commission and Kern County Board of Supervisors.

The Buttonbush Solar and Storage Project would construct an up to 2-gigawatt (GW) solar PV energy generating facility with up to 2 GW of battery storage. As a landowner participating in the Project, I believe that this is a beneficial use of the agricultural lands at the Project site. With the implementation of the state approved Sustainable Groundwater Management Act, the Kern County Groundwater Subbasin has been identified as critically over-drafted. The local water districts are relying on reduced irrigation on farmlands to meet water sustainability goals. The Project is a way to ensure this land is used in a productive and economically beneficial manner, and because the Project will use minimal water, the water that would have been used for crop irrigation at the Project site can be redirected to other agricultural lands. Using solar for this land will provide revenue, enhance the soil, and overall provide a means to preserve it for future generations. 24-A

The proposed Project offers a win-win scenario for the County and local landowners. By productively using land experiencing water scarcity, the Project will contribute to California's clean energy goals while reducing water usage—a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits like job creation and tax revenue, helping to soften the economic impacts of expected declines in Kern County farming operations.

Solar and storage projects like Buttonbush are essential for increasing energy supply sustainably while improving the Central Valley's air quality. Towards that end, Buttonbush will provide enough clean energy to power 950,000+ homes, day or night, while offsetting as much carbon in one year as planting 250,000 trees. This will significantly reduce regional carbon emissions by hundreds of thousands of metric tons each year and generate lasting benefits for Kern County.

In summary, there are tremendous economic, environmental, and social benefits to this project. Impacts have been minimized, and the project will implement all feasible mitigation measures required by the County. As a result, the benefits of the project far outweigh its impact and should, therefore, be approved.

Thank you for your consideration – I am very excited about the Buttonbush Solar and Storage Project and the benefit it will bring to our community and Kern County.

24-A Cont.

Sincerely,

Tom Toretta
3111 Mirasol Ave
Buttonwillow, Ca 93206

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Comment 24

Tom Toretta (Comment Letter Two)

24-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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25: Brian Romanini (Comment Letter One)

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February 12, 2025

RECEIVED
FEB 19 2025
Kern County Planning &
Natural Resources Dept.

Kern County Planning and Natural Resources Department
2700 M Street, No. 100
Bakersfield, CA 93301

Re: Support for Buttonbush Solar and Storage Project: Water Scarcity Challenges at Shafter Ranch at Wildwood and Merced.

To whom it may concern:

I, Brian Romanini, am the owner of approximately 130-acres located at the corner of Wildwood Rd. and Merced Ave. (087-010-18-00-9 & 087-010-22-00-0). I am writing in support of the proposed Buttonbush Solar and Storage Project, and to provide you with important information regarding the farming activities on the Property and the potential impact of the Project.

My family has owned the Property for more than 40 years, during which it has been used to grow cotton and wheat, but has been an Almond orchard since 1980. It is still an active Almond orchard, however with the cultural costs along with the current cost of water is making it difficult to farm. 25-A

Drought and reduced water deliveries have severely impacted farming operations across Kern County, and our property is no exception. The Property receives water from Semitropic Water Storage District but, in recent years we have struggled to secure the necessary amount of water to sustain farming operations.

Semitropic Water Storage District has announced plans to significantly reduce water deliveries to farmers in this region. These severe water shortages will make it very difficult to continue our farming operations in the years to come.

On approximately 9/23/22, Avantus approached me to discuss leasing portions of the Property for the Project. Leasing the land for solar development would also provide financial stability and allow us to address other farming challenges.

The proposed Project offers a "win-win" for both the County and local landowners like us. By repurposing land already slated for fallowing, the Project will contribute to California's clean energy goals while reducing water usage – a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits such as job creation and tax revenue, helping to mitigate the economic challenges associated with the expected decline in farming operations in Kern County.

For these reasons, I respectfully urge the County to approve the Buttonbush Solar and Storage Project.

Sincerely,

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Comment 25

Brian Romanini (Comment Letter One)

25-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

This page is intentionally left blank

26: Brian Romanini (Comment Letter Two)

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December 22, 2025

RECEIVED
JAN 05 2026
Kern County Planning &
Natural Resources Dept

Electronically transmitted to: fosterja@kerncounty.com

Kern County Planning and Natural Resources Department
Attention: Mr. Jack Foster
2700 M Street, Suite 100
Bakersfield, California 93301

Dear Kern County Planning & Natural Resources Department,

I am writing to convey my strong support for the Buttonbush Solar and Storage Project (proposed by 29SC 8me LLC) and to encourage its approval by the Kern County Planning Commission and Kern County Board of Supervisors.

The Buttonbush Solar and Storage Project would construct an up to 2-gigawatt (GW) solar PV energy generating facility with up to 2 GW of battery storage. As a landowner participating in the Project, I believe that this is a beneficial use of the agricultural lands at the Project site. With the implementation of the state approved Sustainable Groundwater Management Act, the Kern County Groundwater Subbasin has been identified as critically over-drafted. The local water districts are relying on reduced irrigation on farmlands to meet water sustainability goals. The Project is a way to ensure this land is used in a productive and economically beneficial manner, and because the Project will use minimal water, the water that would have been used for crop irrigation at the Project site can be redirected to other agricultural lands. Using solar for this land will provide revenue, enhance the soil, and overall provide a means to preserve it for future generations. 26-A

The proposed Project offers a win-win scenario for the County and local landowners. By productively using land experiencing water scarcity, the Project will contribute to California's clean energy goals while reducing water usage—a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits like job creation and tax revenue, helping to soften the economic impacts of expected declines in Kern County farming operations.

Solar and storage projects like Buttonbush are essential for increasing energy supply sustainably while improving the Central Valley's air quality. Towards that end, Buttonbush will provide enough clean energy to power 950,000+ homes, day or night, while offsetting as much carbon in one year as planting 250,000 trees. This will significantly reduce regional carbon emissions by hundreds of thousands of metric tons each year and generate lasting benefits for Kern County.

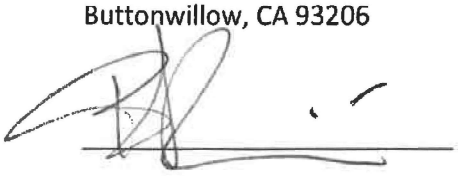
In summary, there are tremendous economic, environmental, and social benefits to this project. Impacts have been minimized, and the project will implement all feasible mitigation measures required by the County. As a result, the benefits of the project far outweigh its impact and should, therefore, be approved.

Thank you for your consideration – I am very excited about the Buttonbush Solar and Storage Project and the benefit it will bring to our community and Kern County.

26-A Cont.

Sincerely,

Brian Romanini
PO Box 786
Buttonwillow, CA 93206



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Comment 26

Brian Romanini (Comment Letter Two)

26-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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27: John Romanini (Comment Letter One)

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February 12, 2025

RECEIVED
FEB 19 2025
Kern County Planning &
Natural Resources Dept.

Kern County Planning and Natural Resources Department
2700 M Street, No. 100
Bakersfield, CA 93301

Re: Support for Buttonbush Solar and Storage Project: Water Scarcity Challenges at Shafter Ranch at Wildwood and Merced.

To whom it may concern:

I, John Romanini, am the owner of approximately 160-acres located at the corner of Wildwood Rd. and Merced Ave. (087-010-20-00-4 & 087-020-01-00-2). I am writing in support of the proposed Buttonbush Solar and Storage Project, and to provide you with important information regarding the farming activities on the Property and the potential impact of the Project.

27-A

My family has owned the Property for more than 40 years, during which it has been used to grow cotton and wheat, but has been an Almond orchard since 1980. It is still an active Almond orchard, however with the cultural costs along with the current cost of water is making it difficult to farm.

Drought and reduced water deliveries have severely impacted farming operations across Kern County, and our property is no exception. The Property receives water from Semitropic Water Storage District but, in recent years we have struggled to secure the necessary amount of water to sustain farming operations.

Semitropic Water Storage District has announced plans to significantly reduce water deliveries to farmers in this region. These severe water shortages will make it very difficult to continue our farming operations in the years to come.

On approximately 9/23/22, Avantus approached me to discuss leasing portions of the Property for the Project. Leasing the land for solar development would also provide financial stability and allow us to address other farming challenges.

The proposed Project offers a "win-win" for both the County and local landowners like us. By repurposing land already slated for fallowing, the Project will contribute to California's clean energy goals while reducing water usage – a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits such as job creation and tax revenue, helping to mitigate the economic challenges associated with the expected decline in farming operations in Kern County.

For these reasons, I respectfully urge the County to approve the Buttonbush Solar and Storage Project.

Sincerely,

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Comment 27

John Romanini (Comment Letter One)

27-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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28: John Romanini (Comment Letter Two)

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December 18, 2025

RECEIVED
JAN 05 2026
Kern County Planning &
Natural Resources Dept.

Electronically transmitted to: fosterja@kerncounty.com

Kern County Planning and Natural Resources Department
Attention: Mr. Jack Foster
2700 M Street, Suite 100
Bakersfield, California 93301

Dear Kern County Planning & Natural Resources Department,

I am writing to convey my strong support for the Buttonbush Solar and Storage Project (proposed by 29SC 8me LLC) and to encourage its approval by the Kern County Planning Commission and Kern County Board of Supervisors.

The Buttonbush Solar and Storage Project would construct an up to 2-gigawatt (GW) solar PV energy generating facility with up to 2 GW of battery storage. As a landowner participating in the Project, I believe that this is a beneficial use of the agricultural lands at the Project site. With the implementation of the state approved Sustainable Groundwater Management Act, the Kern County Groundwater Subbasin has been identified as critically over-drafted. The local water districts are relying on reduced irrigation on farmlands to meet water sustainability goals. The Project is a way to ensure this land is used in a productive and economically beneficial manner, and because the Project will use minimal water, the water that would have been used for crop irrigation at the Project site can be redirected to other agricultural lands. Using solar for this land will provide revenue, enhance the soil, and overall provide a means to preserve it for future generations.

28-A

The proposed Project offers a win-win scenario for the County and local landowners. By productively using land experiencing water scarcity, the Project will contribute to California's clean energy goals while reducing water usage—a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits like job creation and tax revenue, helping to soften the economic impacts of expected declines in Kern County farming operations.

Solar and storage projects like Buttonbush are essential for increasing energy supply sustainably while improving the Central Valley's air quality. Towards that end, Buttonbush will provide enough clean energy to power 950,000+ homes, day or night, while offsetting as much carbon in one year as planting 250,000 trees. This will significantly reduce regional carbon emissions by hundreds of thousands of metric tons each year and generate lasting benefits for Kern County.

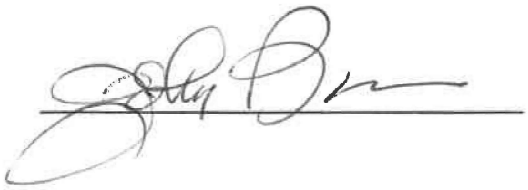
In summary, there are tremendous economic, environmental, and social benefits to this project. Impacts have been minimized, and the project will implement all feasible mitigation measures required by the County. As a result, the benefits of the project far outweigh its impact and should, therefore, be approved.

Thank you for your consideration – I am very excited about the Buttonbush Solar and Storage Project and the benefit it will bring to our community and Kern County.

28-A
Cont.

Sincerely,

John Romanini
PO Box 786
Buttonwillow, CA 93206



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Comment 28

John Romanini (Comment Letter Two)

28-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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29: Mark Romanini (Comment Letter One)

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February 12, 2025

RECEIVED
FEB 19 2025
Kern County Planning &
Natural Resources Dept.

Kern County Planning and Natural Resources Department
2700 M Street, No. 100
Bakersfield, CA 93301

Re: Support for Buttonbush Solar and Storage Project: Water Scarcity Challenges at Shafter Ranch at Wildwood and Merced.

To whom it may concern:

I, Mark Romanini, am the owner of approximately 130-acres located at the corner of Wildwood Rd. and Merced Ave. (087-010-18-00-9 & 087-010-22-00-0). I am writing in support of the proposed Buttonbush Solar and Storage Project, and to provide you with important information regarding the farming activities on the Property and the potential impact of the Project.

My family has owned the Property for more than 40 years, during which it has been used to grow cotton and wheat, but has been an Almond orchard since 1980. It is still an active Almond orchard, however with the cultural costs along with the current cost of water is making it difficult to farm. 29-A

Drought and reduced water deliveries have severely impacted farming operations across Kern County, and our property is no exception. The Property receives water from Semitropic Water Storage District but, in recent years we have struggled to secure the necessary amount of water to sustain farming operations.

Semitropic Water Storage District has announced plans to significantly reduce water deliveries to farmers in this region. These severe water shortages will make it very difficult to continue our farming operations in the years to come.

On approximately 9/23/22, Avantus approached me to discuss leasing portions of the Property for the Project. Leasing the land for solar development would also provide financial stability and allow us to address other farming challenges.

The proposed Project offers a "win-win" for both the County and local landowners like us. By repurposing land already slated for fallowing, the Project will contribute to California's clean energy goals while reducing water usage – a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits such as job creation and tax revenue, helping to mitigate the economic challenges associated with the expected decline in farming operations in Kern County.

For these reasons, I respectfully urge the County to approve the Buttonbush Solar and Storage Project.

Sincerely,

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Comment 29

Mark Romanini (Comment Letter One)

29-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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30: Mark Romanini (Comment Letter Two)

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December 22, 2025

RECEIVED
JAN 05 2026
Kern County Planning &
Natural Resources Dept.

Electronically transmitted to: fosterja@kerncounty.com

Kern County Planning and Natural Resources Department
Attention: Mr. Jack Foster
2700 M Street, Suite 100
Bakersfield, California 93301

Dear Kern County Planning & Natural Resources Department,

I am writing to convey my strong support for the Buttonbush Solar and Storage Project (proposed by 29SC 8me LLC) and to encourage its approval by the Kern County Planning Commission and Kern County Board of Supervisors.

The Buttonbush Solar and Storage Project would construct an up to 2-gigawatt (GW) solar PV energy generating facility with up to 2 GW of battery storage. As a landowner participating in the Project, I believe that this is a beneficial use of the agricultural lands at the Project site. With the implementation of the state approved Sustainable Groundwater Management Act, the Kern County Groundwater Subbasin has been identified as critically over-drafted. The local water districts are relying on reduced irrigation on farmlands to meet water sustainability goals. The Project is a way to ensure this land is used in a productive and economically beneficial manner, and because the Project will use minimal water, the water that would have been used for crop irrigation at the Project site can be redirected to other agricultural lands. Using solar for this land will provide revenue, enhance the soil, and overall provide a means to preserve it for future generations.

30-A

The proposed Project offers a win-win scenario for the County and local landowners. By productively using land experiencing water scarcity, the Project will contribute to California's clean energy goals while reducing water usage—a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits like job creation and tax revenue, helping to soften the economic impacts of expected declines in Kern County farming operations.

Solar and storage projects like Buttonbush are essential for increasing energy supply sustainably while improving the Central Valley's air quality. Towards that end, Buttonbush will provide enough clean energy to power 950,000+ homes, day or night, while offsetting as much carbon in one year as planting 250,000 trees. This will significantly reduce regional carbon emissions by hundreds of thousands of metric tons each year and generate lasting benefits for Kern County.

In summary, there are tremendous economic, environmental, and social benefits to this project. Impacts have been minimized, and the project will implement all feasible mitigation measures required by the County. As a result, the benefits of the project far outweigh its impact and should, therefore, be approved.

Thank you for your consideration – I am very excited about the Buttonbush Solar and Storage Project and the benefit it will bring to our community and Kern County.

30-A
Cont.

Sincerely,

Mark Romanini
PO Box 786
Buttonwillow, CA 93206



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Comment 30

Mark Romanini (Comment Letter Two)

30-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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31: Starrh and Starrh Cotton Growers, LP

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RECEIVED
APR 22 2025
Kern County Planning &
Natural Resources Dept.

Starrh & Starrh Cotton Growers, LP
Attention: Carol Starrh Kroeker, Partner
29985 Fresno Avenue
P.O. Box 1537
Shafter, CA 93263
Starrh.Farm@gmail.com

March 18, 2025

Via U.S. Mail

Kern County Planning and Natural Resources Department
2700 M Street, No. 100
Bakersfield, CA 93301

Re: Support for "Buttonbush Solar and Storage Project": Water Challenges at "Independence Ranch"

To Whom It Concerns:

We are the owners of the "Independence Ranch," located at the intersection of Interstate 5 and 7th Standard Road in Kern County. Independence Ranch is comprised of five separate APNs, including 100-010-13, 100-010-14, 100-010-22, 100-100-31, and 100-010-32. The total APN acres is 679.04. We respectfully submit this letter as support for the proposed "Buttonbush Solar and Storage Project." We want to provide you with information and our perspective concerning changes in California agriculture on some critical issues affecting our property. We also write to share with you why we support the proposed "Buttonbush Solar and Solar Storage Project," which will benefit our family and the community as we rise to meet the challenges that lie ahead. 31-A

Our family has farmed in Kern County since the 1920s and has witnessed many changes over the years, both during our time and through the generations that preceded us. My grandfather, George Starrh, came to Kern County from Arizona. George Starrh was a farmer in Arizona, but he migrated to Kern County because of the water shortages he and his family faced there. Ever since our family has been battling to obtain the water that is so critical to the ability to farm productively. That fight has raged for over a hundred years, with no end in sight. My father, Fred Starrh, served on the Kern County Water Agency Board for 28 years, diligently working to help improve the availability of irrigation and

domestic water supplies for Kern County residents, farmers, and municipalities. During his tenure on the Kern County Water Agency, Fred Starrh was instrumental in pioneering efforts to conserve and preserve water for Kern County, including his work on water banking. Unfortunately, and despite more than a life's work by my family, as farmers, we face the persistent problems of frequent drought, chronically deficient surface water allocations, and, now, the newest challenge -- SGMA. We find ourselves at a tipping point and now contemplate the reality that water shortages will make it impossible to support our current plantings.

31-A Cont.

Semitropic Water Storage District ("District") services "Independence Ranch" and a secondary ranch location operated by Starrh & Starrh Cotton Growers, LP. We have been informed that the District plans to reduce water deliveries by more than 120,000 acre-feet per year. This fact, coupled with the expected restrictions on groundwater pumping under the operation of SGMA, will directly impact both of the ranch locations we farm within the District. The stark reality is that we do not have, and cannot reasonably expect to receive, an adequate irrigation supply to sustain productive agricultural production as it is presently configured.

With the support of the Kern County Planning and Natural Resources Department, we plan to move most of the water allocation from "Independence Ranch" to "Lerdo Ranch," comprised of 500 acres also within the District. This will allow "Lerdo Ranch" to remain sustainable and productive, notwithstanding expected changes and disruptions to water supplies.

Recognizing these unsustainable conditions, the "Buttonbush Solar and Storage Project" presents a timely and necessary opportunity for us to remain in business. Leasing the land for solar development will enable us to concentrate our water resources on the remaining acres that we intend to continue farming.

That project also promises Starrh & Starrh Cotton Growers the assurance of assured revenue, with which to offset expected losses associated with the ever-increasing cost of surface irrigation water, unpredictable fluctuations in crop yields, and commodity price disruptions, whether market-driven or part of the most recent trade wars. Lease revenues will provide our farm the ability to achieve diversification to help ensure the family can continue operations into the fourth and fifth generation of proud Kern County farmers. Our family is currently producing grains, carrots, onions, corn, almonds, pistachios, and cherries, and we would love to "harvest the sun" and "farm for electrons" as well.

In our view, the proposed "Buttonbush Solar and Solar Storage Project" makes a responsible contribution to California's clean energy goals while reducing the demands on irrigation water supplies. We strongly urge the County to approve the "Buttonbush Solar and Solar Storage Project" so that we can continue doing what we love most: feeding families and supporting our community. 31-A Cont.

Sincerely,

Carol Starrh Kroeker

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Comment 31

Starrh and Starrh Cotton Growers, LP

31-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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32: Fred Palla Farms

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Fred Palla Farms
327 Corn Camp Road
Buttonwillow, CA. 93206

RECEIVED
JUL 28 2025
Kern County Planning &
Natural Resources Dept.

July 20, 2025

Kern County Planning and Natural Resources Department
2700 M Street, No. 100
Bakersfield, CA. 9301

Support for Buttonbush Solar Storage Project

To Whom It May Concern:

I am the co-owner of Fred Palla Farms LLC and Fred Palla Farms Inc., which consists of approximately 376.7 acres to be leased by Avantus: Parcel IDs # 087-200-16-00-81, 087-200-28-00-3, 087-200-29-00-6, 087-200-30-00-8, 087-200-31-00-01, 087-200-35-00-3, and 087-200-54-00-8. The land to be leased is currently not being farmed because of a limited water supply. Future regulations will limit it even more. The Buttonbush Solar and Storage project gives a viable solution caused by the ongoing water shortage.

32-A

Sincerely,

Mark Palla

Mark Palla
Co-owner

This page is intentionally left blank

Comment 32

Fred Palla Farms

32-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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33: Affentranger Ranches

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Affentranger Ranches
18107 Kratzmeyer Rd
Bakersfield, CA 93314-9481

March 24, 2025

RECEIVED
APR 01 2025
Kern County Planning &
Natural Resources Dept.

Kern County Planning and Natural Resources Department
Attn: Buttonbush Solar Project
2700 M Street, No. 100
Bakersfield, CA 93301

Re: Support for Buttonbush Solar and Storage Project: Water Scarcity Challenges at Affentranger Ranches

To Whom It May Concern:

I am a partner of a family-owned partnership, Affentranger Ranches, which owns approximately 1,335 acres of agricultural property located near Buttonwillow, CA. The attached Exhibit 1 lists the county APNs and corresponding acres. I am writing in support of the proposed Buttonbush Solar and Storage Project (Project), and to provide you with important information regarding the farming activities on our property and the potential impact of the Project.

Our family has owned this farm property for more than 29 years, during which it has been used to grow commodities such as alfalfa, wheat, cotton, and corn. Most recently, we produce almonds which has become increasingly challenging due to California's regulatory environment (i.e. SGMA), high input costs such as labor and energy and significant water reductions. In the past five years, in order to sustain our operations, we have undertaken extensive activities such as fallowing land, tilling reductions, adding soil amendments, and installing efficient irrigation systems. This has been very expensive and with each passing year, these costs continue to rise without corresponding revenue increases. 33-A

Drought and reduced water deliveries due to the Sustainable Groundwater Management Act (SGMA) have severely impacted farming operations across Kern County, and our property is no exception. SGMA requires our water agencies to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Our property receives water from Semitropic Water Storage District and Rosedale-Rio Bravo Water Storage District but, in recent years we have been unable to secure the necessary amount of water at a price that allows us to sustain our farming operation.

California's State Water Project (SWP) has announced plans to significantly reduce water deliveries to farmers in this region. The SWP's 2025 water allocation is currently at 35% which will cut water deliveries to our water districts which in turn leads to water reductions for agricultural farms including ours. Other dire announcements include Semitropic Water Storage District's plan to reduce water deliveries by more than 120,000 acre-feet per year. The district

expects this to result in fallowing of over 30-thousand acres of farmlands in and around Kern County. These severe water shortages will make it nearly impossible to continue our farming operations in the years to come. Reducing productive farm land will also affect our local community in the form of unemployed farm workers, decreased property land values, and a reduction to Kern County's property tax assessments.

Recognizing these unsustainable conditions, our family made the difficult economic decision in late 2020 to take a large portion of our farm property out of production steadily by 2026. We came to that decision before any discussions about leasing the land for the Project. Water scarcity, combined with increasing input costs of farming made it clear that continued agricultural activity on our farm property was no longer feasible.

33-A
Cont.

In 2021, Avantus approached us to discuss leasing portions of our property for the Project. Since we had already decided to fallow a large portion of our farm land, this seemed like a valuable opportunity to repurpose our property for a productive, water-efficient use. Leasing the land for solar development would also provide financial stability and allow us to transition into a different industry while benefiting the local community by freeing up our water allocation so it could be used by others while also maintaining a high-value tax base for Kern County.

The proposed Project offers a "win-win" for both Kern County and local landowners like us. By repurposing land already slated for fallowing, the Project will contribute to California's clean energy goals while reducing water usage demanded by SGMA – a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits such as job creation and tax revenue, helping to mitigate the economic challenges associated with the expected decline in farming operations in Kern County.

For these reasons, we respectfully urge the County to approve the Buttonbush Solar and Storage Project.

Sincerely,

Rosemarie Millan

Rosemarie Millan
Affentranger Ranches

Affentranger Ranches
Exhibit 1

APN	Acres
• 103-060-08-00-2	78.00
• 103-060-09-00-5	2.00
• 103-060-10-00-7	240.00
• 103-060-11-00-0	160.00
• 103-060-12-00-3	160.00
• 103-070-07-00-2	160.00
• 103-070-08-00-5	160.00
• 104-050-01-01-4	217.35
• 104-050-08-00-6	157.85
	1,335.20

33-A
Cont.

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Comment 33

Affentranger Ranches

33-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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34: Affentranger Brothers

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Affentranger Brothers
18107 Kratzmeyer Rd
Bakersfield, CA 93314-9481

RECEIVED

APR 0 1 2025

Kern County Planning &
Natural Resources Dept.

March 24, 2025

Kern County Planning and Natural Resources Department
Attn: Buttonbush Solar Project
2700 M Street, No. 100
Bakersfield, CA 93301

Re: Support for Buttonbush Solar and Storage Project: Water Scarcity Challenges at Affentranger Brothers

To Whom It May Concern:

I am a partner of a family-owned partnership, Affentranger Brothers, which owns approximately 240 acres of agricultural property located near Buttonwillow, CA. The attached Exhibit 1 lists the county APNs and corresponding acres. I am writing in support of the proposed Buttonbush Solar and Storage Project (Project), and to provide you with important information regarding the farming activities on our property and the potential impact of the Project.

34-A

Our family has owned this farm property for more than 41 years, during which it has been used to grow commodities such as alfalfa, wheat, cotton, and corn. Most recently, we produce almonds which has become increasingly challenging due to California's regulatory environment (i.e. SGMA), high input costs such as labor and energy and significant water reductions. In the past five years, in order to sustain our operations, we have undertaken extensive activities such as fallowing land, tilling reductions, adding soil amendments, and installing efficient irrigation systems. This has been very expensive and with each passing year, these costs continue to rise without corresponding revenue increases.

Drought and reduced water deliveries due to the Sustainable Groundwater Management Act (SGMA) have severely impacted farming operations across Kern County, and our property is no exception. SGMA requires our water agencies to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Our property receives water from Semitropic Water Storage District and Rosedale-Rio Bravo Water Storage District but, in recent years we have been unable to secure the necessary amount of water at a price that allows us to sustain our farming operation.

California's State Water Project (SWP) has announced plans to significantly reduce water deliveries to farmers in this region. The SWP's 2025 water allocation is currently at 35% which will cut water deliveries to our water districts which in turn leads to water reductions for agricultural farms including ours. Other dire announcements include Semitropic Water Storage District's plan to reduce water deliveries by more than 120,000 acre-feet per year. The district

expects this to result in fallowing of over 30-thousand acres of farmlands in and around Kern County. These severe water shortages will make it nearly impossible to continue our farming operations in the years to come. Reducing productive farm land will also affect our local community in the form of unemployed farm workers, decreased property land values, and a reduction to Kern County's property tax assessments.

Recognizing these unsustainable conditions, our family made the difficult economic decision in late 2020 to take a large portion of our farm property out of production steadily by 2026. We came to that decision before any discussions about leasing the land for the Project. Water scarcity, combined with increasing input costs of farming made it clear that continued agricultural activity on our farm property was no longer feasible.

34-A Cont.

In 2021, Avantus approached us to discuss leasing portions of our property for the Project. Since we had already decided to fallow a large portion of our farm land, this seemed like a valuable opportunity to repurpose our property for a productive, water-efficient use. Leasing the land for solar development would also provide financial stability and allow us to transition into a different industry while benefiting the local community by freeing up our water allocation so it could be used by others while also maintaining a high-value tax base for Kern County.

The proposed Project offers a "win-win" for both Kern County and local landowners like us. By repurposing land already slated for fallowing, the Project will contribute to California's clean energy goals while reducing water usage demanded by SGMA – a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits such as job creation and tax revenue, helping to mitigate the economic challenges associated with the expected decline in farming operations in Kern County.

For these reasons, we respectfully urge the County to approve the Buttonbush Solar and Storage Project.

Sincerely,

Franz Affentranger
Affentranger Brothers

Affentranger Brothers
Exhibit 1

34-A
Cont.

APN	Acres
• 103-070-15-00-5	39.72
• 103-070-16-00-8	40.24
• 103-070-17-00-1	39.74
• 103-070-18-00-4	40.25
• 103-070-19-00-7	80.03
	239.98

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Comment 34

Affentranger Brothers

34-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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35: Affentrnager Farms, LLC

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Affentranger Farms, LLC
18107 Kratzmeyer Rd
Bakersfield, CA 93314-9481

RECEIVED
APR 0 1 2025
Kern County Planning &
Natural Resources Dept.

March 24, 2025

Kern County Planning and Natural Resources Department
Attn: Buttonbush Solar Project
2700 M Street, No. 100
Bakersfield, CA 93301

Re: Support for Buttonbush Solar and Storage Project: Water Scarcity Challenges at Affentranger Farms, LLC

To Whom It May Concern:

I am a member of a family-owned limited liability company, Affentranger Farms, LLC, which owns approximately 988 acres of agricultural property located near Buttonwillow, CA. The attached Exhibit 1 lists the county APNs and corresponding acres. I am writing in support of the proposed Buttonbush Solar and Storage Project (Project), and to provide you with important information regarding the farming activities on our property and the potential impact of the Project.

Our family has owned this farm property for more than 17 years, during which it has been used to grow commodities such as alfalfa, wheat, cotton, and corn. Most recently, we produce almonds which has become increasingly challenging due to California's regulatory environment (i.e. SGMA), high input costs such as labor and energy and significant water reductions. In the past five years, in order to sustain our operations, we have undertaken extensive activities such as fallowing land, tilling reductions, adding soil amendments, and installing efficient irrigation systems. This has been very expensive and with each passing year, these costs continue to rise without corresponding revenue increases. 35-A

Drought and reduced water deliveries due to the Sustainable Groundwater Management Act (SGMA) have severely impacted farming operations across Kern County, and our property is no exception. SGMA requires our water agencies to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Our property receives water from Semitropic Water Storage District and Rosedale-Rio Bravo Water Storage District but, in recent years we have been unable to secure the necessary amount of water at a price that allows us to sustain our farming operation.

California's State Water Project (SWP) has announced plans to significantly reduce water deliveries to farmers in this region. The SWP's 2025 water allocation is currently at 35% which will cut water deliveries to our water districts which in turn leads to water reductions for agricultural farms including ours. Other dire announcements include Semitropic Water Storage

District's plan to reduce water deliveries by more than 120,000 acre-feet per year. The district expects this to result in fallowing of over 30-thousand acres of farmlands in and around Kern County. These severe water shortages will make it nearly impossible to continue our farming operations in the years to come. Reducing productive farm land will also affect our local community in the form of unemployed farm workers, decreased property land values, and a reduction to Kern County's property tax assessments.

Recognizing these unsustainable conditions, our family made the difficult economic decision in late 2020 to take a large portion of our farm property out of production steadily by 2026. We came to that decision before any discussions about leasing the land for the Project. Water scarcity, combined with increasing input costs of farming made it clear that continued agricultural activity on our farm property was no longer feasible. 35-A Cont.

In 2021, Avantus approached us to discuss leasing portions of our property for the Project. Since we had already decided to fallow a large portion of our farm land, this seemed like a valuable opportunity to repurpose our property for a productive, water-efficient use. Leasing the land for solar development would also provide financial stability and allow us to transition into a different industry while benefiting the local community by freeing up our water allocation so it could be used by others while also maintaining a high-value tax base for Kern County.

The proposed Project offers a "win-win" for both Kern County and local landowners like us. By repurposing land already slated for fallowing, the Project will contribute to California's clean energy goals while reducing water usage demanded by SGMA – a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits such as job creation and tax revenue, helping to mitigate the economic challenges associated with the expected decline in farming operations in Kern County.

For these reasons, we respectfully urge the County to approve the Buttonbush Solar and Storage Project.

Sincerely,

Franz Affentranger
Affentranger Farms, LLC

Affentranger Farms, LLC
Exhibit 1

APN	Acres
• 103-010-18-00-6	31.13
• 103-010-19-00-9	32.05
• 103-010-20-00-1	31.13
• 103-010-21-00-4	16.03
• 103-010-25-00-6	104.18
• 103-010-28-00-5	153.34
• 103-010-30-00-0	16.03
• 103-010-31-00-3	32.05
• 103-010-32-00-6	94.32
• 103-010-39-00-7	26.40
• 103-010-40-00-9	52.69
• 103-060-05-01-2	318.18
• 103-070-13-00-9	39.70
• 103-070-14-00-2	40.22
	987.45

35-A
Cont.

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Comment 35

Affentrnager Farms, LLC

35-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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36: Cauzza Growers

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CAUZZA GROWERS
1600 Corn Camp Road
Buttonwillow, California
93206

Kern County Planning and Natural Resources Department

Attn: Jack Foster

2700 M Street, No. 100

Bakersfield, CA 93301

Re: Support for Buttonbush Solar and Storage Project: Water Scarcity Challenges at Cauzza Ranches.

To whom it may concern,

We are the managers of the Cauzza Ranches property, an approximately 500-acre farm located in between Buttonwillow Drive and Wasco Way just north of the town of Buttonwillow. We are writing in support of the proposed Buttonbush Solar and Storage Project, and to provide you with important information regarding the farming activities on the property and the potential impact of the project.

36-A

Our family has owned the property for more than 50 years, during which it has been used to grow products such as alfalfa, carrots, corn, cotton, garlic, onions, tomatoes, wheat, and pistachios. Most recently, we produced carrots, garlic, onions, cotton, and pistachios which has been increasingly challenging due to both the labor-intensive nature of farming and significant water demand. For example, in the past three years we have had to fallow nearly 20% of the land to have enough water to sufficiently irrigate the crops we plant. Due to the Sustainable Groundwater Management Act and deteriorating supply from the State Water Project we only expect that number to increase in the coming years.

Drought and reduced water deliveries have severely impacted farming operations across Kern County, and our property is no exception. The property receives water from the Semitropic Water Storage District but, in recent years we have struggled to secure the necessary amount of water to sustain farming operations.

Semitropic Water Storage District has announced plans to significantly reduce water deliveries to farmers in this region. Semitropic Water Storage District plans to reduce water deliveries by more than 120,000 acre-feet per year. The district expects this to result in the fallowing of over 30,000 acres of farmlands in Kern County. These severe water shortages will make it very difficult, if not impossible, to continue our farming operations in the years to come.

Recognizing these unsustainable conditions, our family understands and has made the difficult decision that we will have to take 80% of our acreage out of production by the year 2040. We came to that decision before any discussions about leasing the land for the project. Water scarcity, combined with increasing costs of farming made it clear that continued agricultural activity on this property was no longer feasible.

36-A
Cont.

In late 2019, Avantus approached us to discuss leasing portions of the property for the project. Since we had already decided to fallow a portion of the land, this seemed like a valuable opportunity to repurpose the property for a productive, water-efficient use. Leasing the land for solar development would also provide financial stability and allow us to continue farming the other properties we manage effectively and efficiently.

The proposed project offers a "win-win" for both the County and local landowners like ourselves. By repurposing land already slated for fallowing, the project will contribute to California's clean energy goals while reducing water usage – a critical benefit given the ongoing drought and reduced water availability. Additionally, the project will bring economic benefits such as job creation and tax revenue, helping to mitigate the economic challenges associated with the expected decline in farming operations in Kern County.

For these reasons, we respectfully urge the County to approve the Buttonbush Solar and Storage Project.

Sincerely,

Jacob M. Cauzza
Partner

Matthew A. Cauzza
Partner

Lucas A. Cauzza
Partner

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Comment 36

Cauzza Growers

36-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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37: Farmers Cooperative Gin, Inc.

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FARMERS COOPERATIVE GIN, INC.
2531 Wasco Way • Buttonwillow, CA 93206
Phone: (661)764-5251 • Fax: (661) 764-6600
Email: fcoopgin@atginternet.com

December 16, 2025

Electronically transmitted to: fosterja@kerncounty.com

Kern County Planning and Natural Resources Department
Attention: Mr. Jack Foster
2700 M Street, Suite 100
Bakersfield, California 93301

Dear Kern County Planning & Natural Resources Department,

I am writing to convey my strong support for the Buttonbush Solar and Storage Project (proposed by 29SC 8me LLC) and to encourage its approval by the Kern County Planning Commission and Kern County Board of Supervisors.

The Buttonbush Solar and Storage Project would construct an up to 2-gigawatt (GW) solar PV energy generating facility with up to 2 GW of battery storage. As a landowner participating in the Project, I believe that this is a beneficial use of the agricultural lands at the Project site. With the implementation of the state approved Sustainable Groundwater Management Act, the Kern County Groundwater Subbasin has been identified as critically over-drafted. The local water districts are relying on reduced irrigation on farmlands to meet water sustainability goals. The Project is a way to ensure this land is used in a productive and economically beneficial manner, and because the Project will use minimal water, the water that would have been used for crop irrigation at the Project site can be redirected to other agricultural lands. Using solar for this land will provide revenue, enhance the soil, and overall provide a means to preserve it for future generations.

37-A

The proposed Project offers a win-win scenario for the County and local landowners. By productively using land experiencing water scarcity, the Project will contribute to California's clean energy goals while reducing water usage—a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits like job creation and tax revenue, helping to soften the economic impacts of expected declines in Kern County farming operations.

Solar and storage projects like Buttonbush are essential for increasing energy supply sustainably while improving the Central Valley's air quality. Towards that end, Buttonbush will provide enough clean energy to power 950,000+ homes, day or night, while offsetting as much carbon in one year as planting 250,000

trees. This will significantly reduce regional carbon emissions by hundreds of thousands of metric tons each year and generate lasting benefits for Kern County.

In summary, there are tremendous economic, environmental, and social benefits to this project. Impacts have been minimized, and the project will implement all feasible mitigation measures required by the County. As a result, the benefits of the project far outweigh its impact and should, therefore, be approved.

37-A
Cont.

Thank you for your consideration – I am very excited about the Buttonbush Solar and Storage Project and the benefit it will bring to our community and Kern County.

Sincerely,

Adriane Carbonel, Manager
2531 Wasco Way
Buttonwillow, CA 93206

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Comment 37

Farmers Cooperative Gin, Inc.

37-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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38: IBEW Local 428

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Local Union No. 428

INTERNATIONAL BROTHERHOOD of ELECTRICAL WORKERS

Jack Foster
Kern County Planning and Natural Resources Department
2700 M St #100
Bakersfield, CA, 93301
Email: fosterja@kerncounty.com

December 17, 2025

Dear Mr. Foster,

I am writing in support of the Buttonbush Solar and Storage Project currently under consideration.

This project is beneficial for Kern County and will provide well-paying jobs during construction and stable employment opportunities during operations. Buttonbush is estimated to create up to 1,300 union construction jobs and 20 full-time jobs during operations. Local subcontractors for grass removal, solar panel cleaning, and preventative maintenance would also be used during operations. Over its lifetime, the project is expected to generate up to $1,520,000,000 in property taxes and fees, funding vital public services in our community. 38-A

IBEW Local 428 represents over 1,200 members in the region. Approval of the Buttonbush Solar and Storage Project will also create local work that will help the members of IBEW Local 428 provide for their families.

We need this project now to help ensure a thriving, future-focused Kern County. I urge you to approve the Buttonbush Solar and Storage Project.

Sincerely,

Brian Holt
Business Manager/ Financial Secretary

BRIAN HOLT
BUSINESS MANAGER/FINANCIAL SEC.

3921 SILLECT AVENUE
BAKERSFIELD, CALIFORNIA 93308

PHONE (661) 323-2979
FAX (661) 323-1834

AFL-CIO

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Comment 38

IBEW Local 428

38-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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39: LiUNA! Local 220

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LiUNA!

LOCAL 220
6800 District Blvd
Bakersfield, CA 93301
Phone (661) 322-3460 • Fax (661) 281-1333

HERTZ RAMIREZ
Business Manager

DANIEL ZARAGOZA
Secretary Treasurer

MARIO SALINAS
President

SERGIO BARRAGAN
Vice President

FRED WALTHER
Recording Secretary

JUAN CARDENAS
Executive Board

JAIME GUTIERREZ
Executive Board

ROLAND MADERA
Sergeant at Arms

www.local220.us

RECEIVED
JAN 05 2026
Kern County Planning & Natural Resources Dept.

Jack Foster

Kern County Planning and Natural Resources Departmen

2700 M St #100

Bakersfield, CA, 93301

Email: fosterja@kerncounty.com

12/22/2025

Dear Mr. Foster,

I am writing in support of the Buttonbush Solar and Storage Project currently under consideration.

This project is beneficial for Kern County and will provide well-paying jobs during construction and stable employment opportunities during operations. Buttonbush is estimated to create up to 1,300 union construction jobs and 20 full-time jobs during operations. Local subcontractors for grass removal, solar panel cleaning, and preventative maintenance would also be used during operations. Over its lifetime, the project is expected to generate up to $1,520,000,000 in property taxes and fees, funding vital public services in our community.

39-A

LiUNA Local 220 represents over 2,000 members in the region. Approval of the Buttonbush Solar and Storage Project will also create local work that will help the members of Local 220 provide for their families.

We need this project now to help ensure a thriving, future-focused Kern County. I urge you to approve the Buttonbush Solar and Storage Project.

Sincerely,

Hertz Ramirez
Business Manager
LiUNA Local 220
hramirez@local220.us

Feel the Power

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Comment 39

LiUNA! Local 220

39-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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40: The International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers Iron Workers Local Union 155

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The International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers Local Union 155

Affiliated with AFL-CIO

Jack Foster
Kern County Planning and Natural Resources Department
2700 M St #100
Bakersfield, CA, 93301
Email: fosterja@kerncounty.com

December 30, 2025

Dear Mr. Foster,

I am writing to express my support for the Buttonbush Solar and Storage Project currently under review.

This opportunity offers significant benefits to Kern County by creating well-compensated jobs during both the construction and operational phases. The project is projected to generate up to 1,300 union construction positions and 20 full-time operational roles. Additionally, it will engage local subcontractors for services such as vegetation management, solar panel cleaning, and preventative maintenance. Over its lifespan, Buttonbush is anticipated to contribute approximately $1.52 billion in property taxes and fees, providing essential funding for public services within our community.

40-A

Iron Workers Local 155, representing more than 600 members in the region, stands to gain valuable employment opportunities through the approval of this project, supporting our members' ability to provide for their families.

The timely advancement of the Buttonbush Solar and Storage Project is critical to promoting Kern County's long-term prosperity. I respectfully urge the approval of this important project.

Sincerely,

Jesus Castaneda
Business Manager

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Comment 40

The International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers Iron Workers Local Union 155

40-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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41: Iron Workers Local 433

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Jack Foster

Kern County Planning and Natural Resources Department

2700 M St #100

Bakersfield, CA, 93301

Email: fosterja@kerncounty.com

Dec. 23, 2025

I am Rene Palacios, Business Agent and a proud 36-year member of Ironworkers Local 433, and I am writing in strong support of the Buttonbush Solar and Storage Project currently under consideration.

Ironworkers Local 433 represents more than 120 skilled union ironworkers living and working in Kern County. Our members are law-abiding, tax-paying citizens, homeowners, and active members of the community. They serve as mentors, coaches, and role models, contributing positively to the economic stability and social fabric of the region.

41-A

Projects such as Buttonbush provide meaningful, family-sustaining jobs while advancing responsible energy development. This project represents an opportunity to support local workers, strengthen the regional economy, and invest in clean energy infrastructure that benefits the community as a whole.

For these reasons, Ironworkers Local 433 respectfully urges approval of the Buttonbush Solar and Storage Project.

Sincerely,
Rene Palacios
Business Agent
Ironworkers Local 433

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Comment 41

Iron Workers Local 433

41-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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42: California League of United Latin American Citizens Council 3272

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California League of United Latin American Citizens
Council 3272

Craig Murphy
Interim Director
Planning and Natural Resources Department
2700 M Street, Suite 100
Bakersfield, CA 93301
Phone: 661-862-8739
Email: MurphyC@kerncounty.com

December 15, 2025

Dear Craig,

I am writing in support of the Buttonbush Solar Center currently under consideration.

LULAC Council 3272, in keeping with our Mission Statement to support projects that benefit the health, environment, and economic condition of communities in the San Joaquin Valley, supports the Buttonbush Solar Center. The project will be a benefit for the environment and to communities in Kern County; thus, we lend our support.

Buttonbush will bring significant long-term benefits, including stable, well-paying jobs, as well as $10s of millions in local tax revenue that would help fund an array of vital public services for Kern County, benefitting the local community. The hundreds of well-paying energy and construction jobs provided by this project are important opportunities for our community. 42-A

Additionally, solar and storage projects like Buttonbush are essential for increasing energy supply sustainably and will prove to be a benefit to the environment by significantly reducing carbon emissions.

In summary, this project will provide significant benefits for the local economy by delivering much-needed quality jobs while sustainably growing Kern County's clean energy supply. I urge you to approve the Buttonbush Solar Project to help ensure a strong Kern County.

Sincerely,

Rick Garcia
President of Kern County League of United Latin American Citizens (LULAC)

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Comment 42

California League of United Latin American Citizens Council 3272

42-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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43: Kern, Inyo, Mono Counties Building and Construction Trades Council

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Building & Construction Trades Council

Kern, Inyo, & Mono Counties of California AFL-CIO

December 22, 2025

Jack Foster
Kern County Planning and Natural Resources Department
2700 M St, Suite 100
Bakersfield, CA, 93301
Email: fosterja@kerncounty.com

RE: Buttonbush Solar & Storage Project

Dear Mr. Foster,

Kern, Inyo, & Mono Counties Building & Construction Trades Council, representing over 6,000 construction trades members, is pleased to support the Buttonbush Solar and Storage Project currently under consideration. This project will create high-quality local jobs that will allow our members to provide for their families.

Kern, Inyo, & Mono Counties Building & Construction Trades Council supports this project as it is beneficial for Kern County and will provide well-paying jobs during construction and stable employment opportunities during operations. Buttonbush is estimated to create up to 1,300 union construction jobs and 20 full-time jobs during operations. Local subcontractors for grass removal, solar panel cleaning, and preventative maintenance would also be used during operations. Over its lifetime, the project is expected to generate up to $1,520,000,000 in property taxes and fees, funding vital public services in our community.

43-A

We need this project to help ensure a thriving, future-focused Kern County. I urge you to approve the Buttonbush Solar and Storage Project.

Sincerely,

Alissa Reed

Alissa Reed
Executive Secretary
Kern, Inyo, & Mono Counties Building & Construction Trades Council

ALISSA REED
EXECUTIVE SECRETARY

P.O. BOX 1197
BAKERSFIELD, CA 93302

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Comment 43

Kern, Inyo, Mono Counties Building and Construction Trades Council

43-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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7.2.4 Comments Received After Close of the Public Comment Period

44: Alan Bittleston (Comment Letter Two)

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January 3, 2026

Electronically transmitted to: fosterja@kerncounty.com

Kern County Planning and Natural Resources Department
Attention: Mr. Jack Foster
2700 M Street, Suite 100
Bakersfield, California 93301

Dear Kern County Planning & Natural Resources Department,

I am writing to convey my strong support for the Buttonbush Solar and Storage Project (proposed by 29SC 8me LLC) and to encourage its approval by the Kern County Planning Commission and Kern County Board of Supervisors.

The Buttonbush Solar and Storage Project would construct an up to 2-gigawatt (GW) solar PV energy generating facility with up to 2 GW of battery storage. As a landowner participating in the Project, I believe that this is a beneficial use of the agricultural lands at the Project site. With the implementation of the state approved Sustainable Groundwater Management Act, the Kern County Groundwater Subbasin has been identified as critically over-drafted. The local water districts are relying on reduced irrigation on farmlands to meet water sustainability goals. The Project is a way to ensure this land is used in a productive and economically beneficial manner, and because the Project will use minimal water, the water that would have been used for crop irrigation at the Project site can be redirected to other agricultural lands. Using solar for this land will provide revenue, enhance the soil, and overall provide a means to preserve it for future generations. 44-A

The proposed Project offers a win-win scenario for the County and local landowners. By productively using land experiencing water scarcity, the Project will contribute to California's clean energy goals while reducing water usage—a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits like job creation and tax revenue, helping to soften the economic impacts of expected declines in Kern County farming operations.

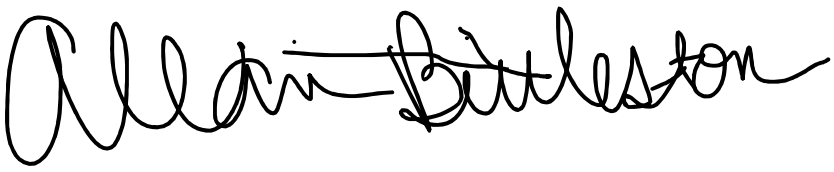
Solar and storage projects like Buttonbush are essential for increasing energy supply sustainably while improving the Central Valley's air quality. Towards that end, Buttonbush will provide enough clean energy to power 950,000+ homes, day or night, while offsetting as much carbon in one year as planting 250,000 trees. This will significantly reduce regional carbon emissions by hundreds of thousands of metric tons each year and generate lasting benefits for Kern County.

In summary, there are tremendous economic, environmental, and social benefits to this project. Impacts have been minimized, and the project will implement all feasible mitigation measures required by the County. As a result, the benefits of the project far outweigh its impact and should, therefore, be approved.

Thank you for your consideration – I am very excited about the Buttonbush Solar and Storage Project and the benefit it will bring to our community and Kern County.

44-A
Cont.

Sincerely,



Allan Bittleston
7210 Meadowbrook Lane
Bakersfield, CA 93309
abtailspin@gmail.com

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Comment 44

Alan Bittleston (Comment Letter Two)

44-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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45: Portwood Farms (Comment Letter Two)

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January 4, 2026

Kern County Planning and Natural Resources Department

Attention: Mr. Jack Foster

2700 M Street, Suite 100

Bakersfield, California 93301

Dear Kern County Planning & Natural Resources Department,

I am writing to convey my support for the Buttonbush Solar and Storage Project and to encourage its approval by the Kern County Planning Commission and Kern County Board of Supervisors.

I have been farming in Kern County for more than 50 years and my family more than 73 years. I have been a Board Member of the Semitropic Water Water Storage District for 41 years. The Implementation of the Sustainable Groundwater Management Act will require The Semitropic Water Storage District to reduce farmed acres by 30,000 acres or more.

45-A

We, personally, will have to reduce farmed land by 700 acres to be sustainable with water restrictions. The Project will keep that 700 acres productive in a different way with minimal water use. It would also allow us to transfer the water allocated for that 700 acres to other farm properties of ours to keep those properties producing crops. This project is a win-win for landowners like us, the County of Kern, Semitropic Water Storage District and all landowners in Semitropic Water Storage District. The proposed project will produce clean energy, jobs, tax revenue and soften the economic impacts of declines in Kern County farming operations.

The impacts have been minimized, and the project will implement all feasible mitigation measures required by the County. The benefits of the project far outweigh any negative impact and should be approved.

45-A
Cont.

Sincerely

Philip Portwood

Philip Portwood

Portwood Farms

17076 Griffith Ave.

Wasco, CA 93280

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Comment 45

Portwood Farms (Comment Letter Two)

45-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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46: SoCalGas

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Transmission Technical
Services Department

9400 Oakdale Ave
Chatsworth, CA 91311
SC9314

January 5, 2026

Jack Foster

Subject: **BUTTONBUSH SOLAR STORAGE PROJECT**

DCF: **2392-25NC**

The Transmission Department of SoCalGas does not operate any facilities within your proposed improvement. However, the Distribution Department of SoCalGas may maintain and operate facilities within your project scope.

46-A

To assure no conflict with the Distribution's pipeline system, please e-mail them at:

NorthwestDistributionUtilityRequest@semprautilities.com

Best Regards,
Nerses Papazyan
SoCalGas Transmission Technical Services
SoCalGasTransmissionUtilityRequest@semprautilities.com

KERN COUNTY
Planning & Natural Resources

Craig M. Murphy, Interim Director
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2323
Phone: (661) 862-8600
TTY Relay 1-800-735-2929
Email: planning@kerncounty.com
Web Address: https://kernplanning.com

NOTICE OF AVAILABILITY FOR PUBLIC REVIEW AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED BUTTONBUSH SOLAR STORAGE PROJECT

This is to advise that the Kern County Planning and Natural Resources Department has prepared a Draft 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: Draft EIR for the Buttonbush Solar and Storage Project by 29SC 8me, LLC. (PP24407); *Site 1:* CUP No. 17, Map 98; CUP No. 19, Map 98; CUP No. 25, Map 99; GPA No. 4, Map 98; SPA No. 5, Map 98; GPA No. 8, Map 99; Williamson Act Land Use Contract Cancellations; Farmland Security Zone Contract Cancellation; Non-Summary Vacation, Map 99. *Site 2:* CUP No. 14, Map 77; CUP No. 20, Map 77; CUP No. 18, Map 98; GPA No. 10, Map 77; Williamson Act Land Use Contract Cancellations. *Site 3:* CUP No. 15, Map 77; GPA No. 11, Map 77; Williamson Act Land Use Contract Cancellations. *Site 4:* CUP No. 16, Map 77; GPA No. 12, Map 77; Williamson Act Land Use Contract Cancellation. *Site 5:* CUP No. 26, Map 99; CUP No. 27, Map 99; CUP No. 28, Map 99; CUP No. 61, Map 100; GPA No. 10, Map 99; GPA No. 31, Map 100; Williamson Act Land Use Contract Cancellations; Non-Summary Vacation, Map 99. *Site 6:* CUP No. 17, Map 78; GPA No. 10, Map 78; Williamson Act Land Use Contract Cancellations. *Site 8:* CUP No. 12, Map 54; CUP No. 17, Map 77; CUP No. 18, Map 77; CUP No. 19, Map 77; GPA No. 1, Map 54; GPA No. 13, Map 77; Williamson Act Land Use Contract Cancellations.

PROJECT LOCATION: The several separate sites of the proposed Project are entirely located within unincorporated Kern County, directly north of the community of Buttonwillow, approximately four miles west of the City of Bakersfield, two miles west of the City of Shafter, and seven miles southwest of the City of Wasco. The proposed Project straddles and crosses Interstate 5 (I-5) and is east of Buttonwillow Raceway Park, north of State Route (SR) 58, and south of Kimberlina Road.

DOCUMENT AVAILABILITY: The Draft EIR and the documents referenced in it are available for public review at the Planning and Natural Resources Department, which is located at 2700 "M" Street, Suite 100, in Bakersfield, CA 93301 or on the Department website at:

https://kernplanning.com/environmental-doc/buttonbush-solar-project/

PUBLIC COMMENT: The required Draft EIR public review period is 45 days.

November 18th, 2025 – January 2nd, 2026

Written comments may be submitted to the project planner identified below prior to the close of the Draft EIR public review period on **January 2nd, 2026, at 5:00 p.m.** to:

Kern County Planning and Natural Resources Department
ATTN: Jack Foster, Planner II
2700 "M" Street, Suite 100, Bakersfield, CA 93301
Phone: (661) 862-5010
E-mail: Fosterja@kerncounty.com

RECEIVED
DEC - 1 2025
2392-25-

PUBLIC HEARING: A public hearing has been scheduled with the Kern County Planning Commission to consider a recommendation on the proposed project and solicit 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:	**February 12, 2026**
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 93301**

After consideration by the Planning Commission, a public hearing will be scheduled for the Kern County Board of Supervisors for final consideration and action. Comments may be provided at that hearing or prior to any action by the Board of Supervisors on any matter. The Board of Supervisors decision is final.

If you challenge the action taken on this request in court, you may be limited to raising only those issues you or someone else raised at this public hearing, or in written correspondence delivered to the Planning and Natural Resources Department at, or prior to, the public hearing.

PROJECT DESCRIPTION: The proposed Buttonbush Solar and Storage Project as proposed by 29SC 8me, LLC. would allow for the construction and operation of a photovoltaic (PV) solar facility with the associated infrastructure on 7 proposed project sites that would collectively generate up to 2,000 megawatts (MW) or 2 gigawatts (GW) of renewable electrical energy including a battery energy storage system (BESS) with the capacity of storing approximately 16,000 megawatt-hours (MWh) or 16 gigawatt-hours (GWh) on approximately 11,983 acres across 128 privately owned parcels in an unincorporated area of northwestern Kern County. Implementation of the proposed project includes requests for multiple General and Specific Plan Amendments (GPAs/SPAs), Conditional Use Permits (CUPs), the cancellation of Williamson Act Land Use and Farmland Security Zone Contracts (WALUC/FSZC), and Non-Summary Street Vacations (NSV) from the Kern County Planning & Natural Resources Department.

ENVIRONMENTAL REVIEW FINDINGS: Anticipated significant and unavoidable impacts on Aesthetics and Visual Resources (Visual Character), Agricultural Resources, Air Quality (Construction), Biological Resources, Mineral Resources, Wildfire.

CRAIG MURPHY, Interim Director
Planning and Natural Resources Department

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

THE BAKERSFIELD CALIFORNIAN

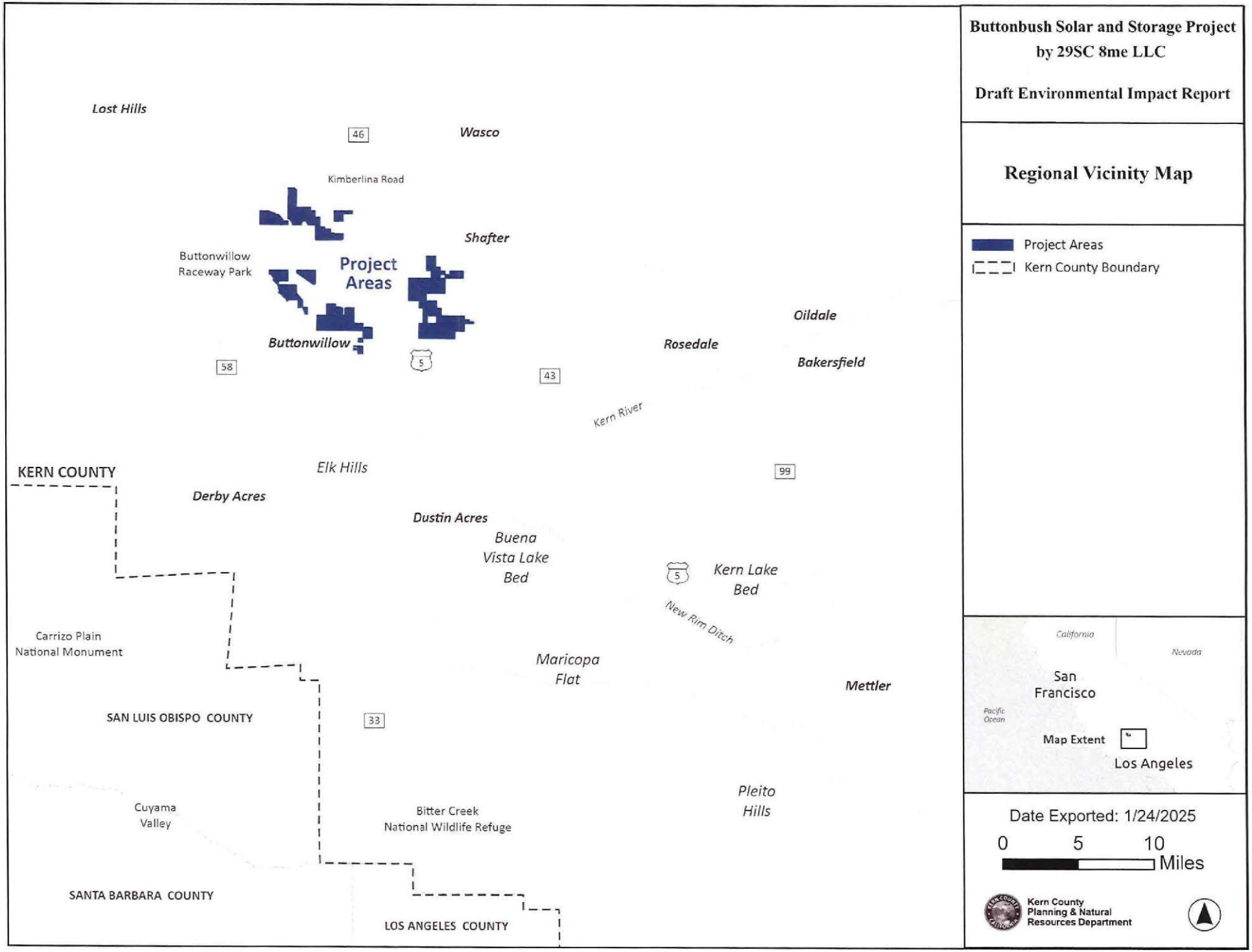
JF (11/18/25)

cc: County Clerk (2) (with fee)
Environmental Status Board
Supervisorial District No. 4

Buttonbush Solar and Storage Project
by 29SC 8me LLC

Draft Environmental Impact Report

Regional Vicinity Map



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Comment 46

SoCalGas

46-A

The comment indicates that the Transmission Department of SoCalGas does not operate any facilities, but that the Distribution Department may maintain and operate facilities within the Project area. The proposed Project will incorporate the following condition of approval: The Project proponent shall coordinate with SoCalGas staff to determine the specific requirements regarding any potential natural gas service or facility issues needed to adequately accommodate the proposed Project. The Project proponent shall comply with, and adhere to, all requirements identified by SoCalGas to accommodate the proposed Project, including avoiding damage to SoCalGas natural gas services and facilities, as needed, as proposed Project construction progresses. Therefore, this comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary. The County thanks the author for their comment and participation in the public review of the environmental document.

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47: Perry Tjaarda

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January 5, 2026

Electronically transmitted to: fosterja@kerncounty.com

Kern County Planning and Natural Resources Department
Attention: Mr. Jack Foster
2700 M Street, Suite 100
Bakersfield, California 93301

Dear Kern County Planning & Natural Resources Department,

I am writing to convey my strong support for the Buttonbush Solar and Storage Project (proposed by 29SC 8me LLC) and to encourage its approval by the Kern County Planning Commission and Kern County Board of Supervisors.

The Buttonbush Solar and Storage Project would construct an up to 2-gigawatt (GW) solar PV energy generating facility with up to 2 GW of battery storage. As a landowner participating in the Project, I believe that this is a beneficial use of the agricultural lands at the Project site. With the implementation of the state approved Sustainable Groundwater Management Act, the Kern County Groundwater Subbasin has been identified as critically over-drafted. The local water districts are relying on reduced irrigation on farmlands to meet water sustainability goals. The Project is a way to ensure this land is used in a productive and economically beneficial manner, and because the Project will use minimal water, the water that would have been used for crop irrigation at the Project site can be redirected to other agricultural lands. Using solar for this land will provide revenue, enhance the soil, and overall provide a means to preserve it for future generations.

47-A

The proposed Project offers a win-win scenario for the County and local landowners. By productively using land experiencing intermittent water scarcity, the Project will contribute to California's clean energy goals while reducing water usage. Additionally, the Project will bring economic benefits like job creation and tax revenue, helping to soften the economic impacts of expected declines in Kern County farming operations.

Solar and storage projects like Buttonbush are essential for increasing energy supply sustainably while improving the Central Valley's air quality. Towards that end, Buttonbush will provide enough clean energy to power 950,000+ homes, day or night, while offsetting as much carbon in one year as planting 250,000 trees. This will significantly reduce regional carbon emissions by hundreds of thousands of metric tons each year and generate lasting benefits for Kern County.

In summary, there are tremendous economic, environmental, and social benefits to this project. Impacts have been minimized, and the project will implement all feasible mitigation measures required by the County. As a result, the benefits of the project far outweigh its impact and should, therefore, be approved.

Thank you for your consideration – I am very excited about the Buttonbush Solar and Storage Project and the benefit it will bring to our community and Kern County. 47-A Cont.

Sincerely,

Perry Tjaarda
19087 Magnolia Ave
Shafter, CA 93263

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Comment 47

Perry Tjaarda

47-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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48: California Department of Transportation—District 6 Office

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California Department of Transportation

DISTRICT 6 OFFICE
1352 WEST OLIVE AVENUE | P.O. BOX 12616 | FRESNO, CA 93778-2616
(559) 981-7373 | FAX (559) 488-4195 | TTY 711
www.dot.ca.gov

January 14, 2026

06KER-5-PM63.289
BUTTONBUSH SOLAR STORAGE PROJECT
SITE PLAN REVIEW
GTS: https://ld-igr-gts.dot.ca.gov/district/6/report/38716#56479

Sent via email

Jack Foster
Kern County Planning and Natural Resources Department
2700 "M" Street, Suite 100
Bakersfield, CA 93301

Dear Mr., Foster:

Thank you for the opportunity to review the Site Development Plan for the proposed Buttonbush Solar and Storage Project. The proposed project site consists of seven proposed locations that would collectively generate up to 2,000 megawatts (MW) of renewable electrical energy, including a battery energy storage system (BESS) with capacity to store approximately 16,000 megawatt-hours (MWh). The total project site area is 11,983 acres across 128 privately owned parcels throughout the County of Kern. 48-A

The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The Local Development Review (LDR) Program reviews land use projects and plans through the lenses of our mission and state planning priorities of infill, conservation, and travel-efficient development. To ensure a safe and efficient transportation system, we encourage early consultation and coordination with local jurisdictions and project proponents on all development projects that utilize the multimodal transportation network.

Caltrans provides the following comments consistent with the State's smart mobility goals that support a vibrant economy and sustainable communities:

1. Based on the materials provided, this submittal appears preliminary and does not include enough information for Caltrans to complete a detailed Traffic Operations review at this time. The vicinity map shows relative project areas but does not identify State Highway System (SHS) facilities or provide information needed to evaluate potential impacts on Caltrans facilities. 48-B

2. To support further review, at a minimum, provide the following information: 48-C

    - Project description and operational statement for each site. This should include information about the expected operational traffic impact of each site. It is also unclear whether the sites will accommodate commercial traffic or if there are plans for charging stations for passenger or commercial vehicles.

    - Site plans and access management. The materials provided show project site boundaries but are missing basic information about each site's direct or indirect connections to state highways, interchanges, or state highway frontage roads. The preliminary site plan should also include information about each site's access management.

3. If the future solar facility is for private use only and a private crossing across I-5 is planned, the crossing will require an Air-Space lease. The encroachment permit for the private crossing will be required to go through the District 6 Right-of-Way Air-Space lease branch. 48-D

4. Any work within the State's Right-of-Way must be performed under an encroachment permit from the Caltrans District 6 Permits Office and must conform to the current Caltrans Highway Design Manual and State Standard Plans and Specifications. The schematic and scope do not acknowledge these requirements, which are essential to ensure project improvements comply with state design and construction standards. An encroachment permit must be obtained for all proposed activities for placement of encroachments within, under or over the State highway rights-of-way. Activity and work planned in the State right-of-way shall be performed to State standards and specifications, at no cost to the State. Engineering plans, calculations, specifications, and reports (documents) shall be stamped and signed by a licensed Engineer or Architect. Engineering documents for encroachment permit activity and work in the State right-of-way may be submitted using English Units. The Permit Department and the Environmental Planning Branch will review and approve the activity and work in the State right-of-way before an encroachment permit is issued. The Streets and Highways Code Section 670 provides Caltrans discretionary approval authority for projects that 48-E

encroach on the State Highway System. Encroachment permits will be issued in accordance with Streets and Highway Codes, Section 671.5, "Time Limitations." Encroachment permits do not run with the land. A change of ownership requires a new permit application. Only the legal property owner or his/her authorized agent can pursue obtaining an encroachment permit. **Please call the Caltrans Encroachment Permit Office - District 6: 1352 W. Olive, Fresno, CA 93778, at (559) 488-4058**. **Please review the permit application checklist at:** https://forms.dot.ca.gov/v2Forms/servlet/FormRenderer?frmid=TR0402&distpath=MAOTO&brapath=PERM

48-E Cont.

If you have any further questions, please contact Nicholas Isla at (559) 981-7373 or email nicholas.isla@dot.ca.gov.

Sincerely,

DAVID PADILLA, Branch Chief
Local Development Review Branch

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Comment 48

California Department of Transportation—District 6 Office

48-A

This comment provides introductory remarks and summarizes the proposed Project. The comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

48-B

The comment notes that the Draft EIR lacks sufficient information for a detailed Caltrans Traffic Operations review and does not identify State Highway System facilities. The Draft EIR includes a peak-hour intersection analysis; specifically, **Table 4.15-5:** *Existing Plus Project Weekday Peak Hour Intersection LOS*, includes all roadways, including State Highway System facilities, that are anticipated to be impacted by peak-hour traffic. No Caltrans-maintained facilities would result in an unacceptable Level of Service. Additionally, the proposed Project assumes a total of 40 daily trips across nearly 12,000 acres, resulting in a negligible traffic increase from the proposed Project operations. The proposed Project would obtain all required permits for oversize vehicles during construction and encroachment permits for aerial gen-tie crossings, as discussed below. Therefore, this comment does not raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record, and revisions to the Draft EIR are not necessary.

48-C

The comment provides details on what is required to support further review to complete a detailed Traffic Operations review, including an operational statement for each site and site plans and access management at each site. The comment also states that the Draft EIR is unclear on whether the sites will accommodate commercial traffic or if there are plans for charging stations for passenger or commercial vehicles. Commercial traffic from the proposed Project would include temporary construction traffic and an infrequent and negligible number of commercial vehicles required for maintenance during operations. There would be no charging stations for passenger or commercial vehicles. This comment does not raise a substantive issue on the content of the Draft EIR. The comments provided have been noted for the record, and revisions to the Draft EIR are not required.

48-D

The proposed Project states that a private crossing across I-5 requires an Air-Space lease.

The Draft EIR discloses that the proposed Project would have gen-tie aerial crossings of the I-5 and potentially SR-58 (Draft EIR Chapter 1 Executive Summary page 1-14, page 1-16, page 1-26, page 1-29; Draft EIR Chapter 2.0 Project Description page 3-100). The Project gen-tie would originate from the proposed development areas, cross I-5, and route to the southern area of the Project site and then south to the existing PG&E's Midway Substation. Overhead collector lines would cross I-5 in several locations, depending on the final substation location(s). The applicant will be required to acquire all necessary crossings and encroachment permits from Caltrans for all aerial gen-tie crossings prior to constructing said portion of transmission line. The proposed Project does not include a private crossing across I-5. This comment does not raise a substantive issue on the content of the Draft EIR. The comments provided have been noted for the record, and revisions to the Draft EIR are not required.

48-E

The comment states that work within the state's right-of-way requires an encroachment permit from Caltrans District 6 and must conform to the current Caltrans Highway Design Manual and State Standard Plans and Specifications. As stated in the Draft EIR, prior to constructing driveways that afford access from public roadways to the Project site, the Project proponent would be required to obtain an encroachment permit, as required by Mitigation Measure MM 4.15-2. The County thanks the author for their comments and participation in the public review of the environmental document.

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49: Cauzza Ranches LLC

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January 6, 2026

RECEIVED
JAN 15 2026
Kern County Planning &
Natural Resources Dept.

Electronically transmitted to: fosterja@kerncounty.com

Kern County Planning and Natural Resources Department
Attention: Mr. Jack Foster
2700 M Street, Suite 100
Bakersfield, California 93301

Dear Kern County Planning & Natural Resources Department,

I am writing to convey my strong support for the Buttonbush Solar and Storage Project (proposed by 29SC 8me LLC) and to encourage its approval by the Kern County Planning Commission and Kern County Board of Supervisors.

The Buttonbush Solar and Storage Project would construct an up to 2-gigawatt (GW) solar PV energy generating facility with up to 2 GW of battery storage. As a landowner participating in the Project, I believe that this is a beneficial use of the agricultural lands at the Project site. With the implementation of the state approved Sustainable Groundwater Management Act, the Kern County Groundwater Subbasin has been identified as critically over-drafted. The local water districts are relying on reduced irrigation on farmlands to meet water sustainability goals. The Project is a way to ensure this land is used in a productive and economically beneficial manner, and because the Project will use minimal water, the water that would have been used for crop irrigation at the Project site can be redirected to other agricultural lands. Using solar for this land will provide revenue, enhance the soil, and overall provide a means to preserve it for future generations. 49-A

The proposed Project offers a win-win scenario for the County and local landowners. By productively using land experiencing water scarcity, the Project will contribute to California's clean energy goals while reducing water usage—a critical benefit given the ongoing drought and reduced water availability. Additionally, the Project will bring economic benefits like job creation and tax revenue, helping to soften the economic impacts of expected declines in Kern County farming operations.

Solar and storage projects like Buttonbush are essential for increasing energy supply sustainably while improving the Central Valley's air quality. Towards that end, Buttonbush will provide enough clean energy to power 950,000+ homes, day or night, while offsetting as much carbon in one year as planting 250,000 trees. This will significantly reduce regional carbon emissions by hundreds of thousands of metric tons each year and generate lasting benefits for Kern County.

In summary, there are tremendous economic, environmental, and social benefits to this project. Impacts have been minimized, and the project will implement all feasible mitigation measures required by the County. As a result, the benefits of the project far outweigh its impact and should, therefore, be approved.

Thank you for your consideration – I am very excited about the Buttonbush Solar and Storage Project and the benefit it will bring to our community and Kern County.

49-A Cont.

Sincerely,



Michael A. Cauzza
Cauzza Ranches LLC
1600 Corn Camp Rd.
Buttonwillow, CA 93206

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Comment 49

Cauzza Ranches LLC

49-A

This comment is in support of the proposed Project and does not state a specific concern related to the adequacy of the Draft EIR. Therefore, it does not require a detailed response. This comment is noted for the record and will be provided to the Planning Commission and Board of Supervisors for consideration. The County thanks the author for their comment and participation in the public review of the environmental document.

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