

Draft Environmental Impact Report

SCH# 2024081205

Volume 1

Chapters 1 through 11

MOJAVE LIFE OF MINE RECLAMATION PLAN AMENDMENT PROJECT
by CalPortland Company.
(PP18108)

CUP No. 21, Map 197; CUP No. 46, Map 198



Kern County
Planning and Natural Resources Department
Bakersfield, CA

April 2026

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**NOTICE OF AVAILABILITY FOR PUBLIC REVIEW AND HEARING ON
THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE
PROPOSED MOJAVE LIFE OF MINE RECLAMATION PLAN AMENDMENT 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 Mojave Life of Mine Reclamation Plan Amendment Project by CalPortland Company; SCH# 2024081205; CUP No. 21, Map 197 and CUP No. 46, Map 198. (PP18108)

PROJECT LOCATION: The proposed project site is located in the unincorporated area of southeastern Kern County, approximately 6 miles southeast of the City of Tehachapi and approximately 7.25 miles west of the unincorporated community of Mojave. The proposed project site straddles Tehachapi Willow Springs Road with majority of it being on the eastern side; the entirety of the proposed project site is south of Oak Creek 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/mojave-life-of-mine-reclamation-plan-amendment-project/>

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

April 17th, 2026 – June 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 **June 2nd, 2026, at 5:00 p.m.** to:

Kern County Planning and Natural Resources Department
ATTN: Randall Cates, Planner III
2700 "M" Street, Suite 100, Bakersfield, CA 93301
Phone: (661) 862-8612
E-mail: CatesR@kerncounty.com

PUBLIC HEARING: A public hearing has been scheduled with the Kern County Planning Commission to consider a decision 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: July 9, 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

This matter would only be considered by the Kern County Board of Supervisors in the event an appeal to the decision of the Planning Commission is filed. If such an appeal is filed, 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 Mojave Life of Mine Reclamation Plan Amendment Project consists of reclamation activities, such as recontouring, stabilizing, revegetation, and monitoring of final slopes and disturbed mining areas; reclamation of roads and ancillary equipment and facilities; and removal of the processing and cement plant facilities within the approximately 4,367-acre proposed project site. Although some reclamation activities are and would continue to be performed concurrent with ongoing mining and processing, reclamation activities for final site reclamation would occur after the completion of mining and processing operations.

On March 15, 2021, the Kern County Planning and Natural Resources Department determined that mining and processing activities are a legal nonconforming (vested) use on approximately 6,658 acres of land owned by the project proponent, inclusive of the approximately 4,367 acres covered by the proposed project. As such, vested and continuing mining activities such as drilling, blasting, material recovery, material movement (with the exception of material movement pertaining to reclamation, e.g. redistribution of stockpiled growth media to aid in revegetation efforts), processing, cement production, and material transport for sale are not subject to discretionary approval by Kern County, and as such are not part of the proposed project. The project proponent proposes to continue to develop its limestone and construction materials resources within the existing vested properties and to increase the life of the mine by approximately 200 years to continue cement and construction materials production. The proposed project would not involve changes to the existing vested mining operations including, for example, production levels, mining systems or processes, and ultimate throughput from the cement plant.

Reclamation of continued operations would require the approval of the proposed project which would amend the approximately 1,542-acre existing reclamation plan (approved in 1979) through approval of the proposed approximately 4,367-acre reclamation plan applicable to the vested properties.

ENVIRONMENTAL REVIEW FINDINGS: Anticipated significant and unavoidable project-level impacts on Biological Resources.

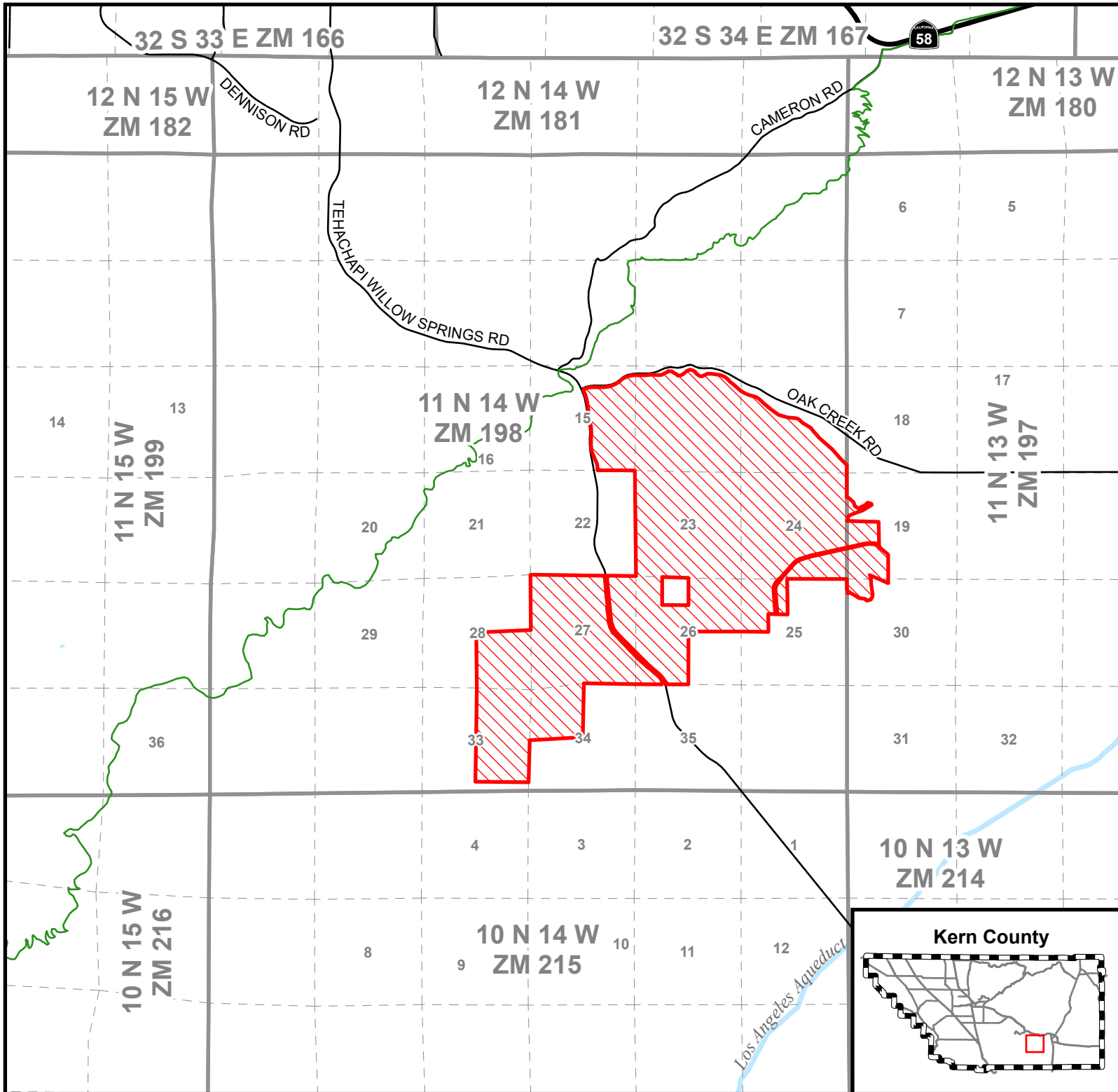
CRAIG M. MURPHY, Director
Planning and Natural Resources Department

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

THE BAKERSFIELD CALIFORNIAN
TEHACHAPI NEWS
MOJAVE DESERT NEWS

RC (4/17/26)

cc: County Clerk (2)
Environmental Status Board
Supervisory District No. 2



Vicinity Map

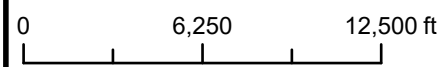
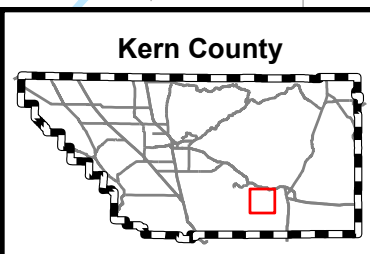
Mojave Life of Mine Reclamation Plan
Amendment Project
CUP No. 21, Map No. 197
CUP No. 46, Map No. 198

CalPortland Company
by SESPE Consulting, Inc.

- Project Boundary
- Pacific Crest Trail
- State Hwy
- Arterials
- Township/Range
- Sections
- Unincorporated Cities

T11N/R14W - Sec. 13-15, 23-28, 33-34
T11N/R13W - Sec. 19, 30

Created on: 2/10/2026



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Mojave Life of Mine Reclamation Plan
Amendment Project by CalPortland
Company (PP18108).
Surrounding Property Owners

237 530 37 00 8
ALTA OAK REALTY LLC
437 MADISON AVE STE A
NEW YORK NY 10022-7036

237 390 06 00 8
CALIF PORTLAND CEMENT CO
PO BOX 371534
LAS VEGAS NV 89137-1534

237 031 43 00 7
CALIFORNIA PORTLAND CEMENT CO
PO BOX 371534
LAS VEGAS NV 89137-1534

237 071 02 00 0
CALIFORNIA PORTLAND CEMENT CO
2025 E FINANCIAL WY
GLEN DORA CA 91741-4692

237 213 17 00 8
CALIFORNIA RESOURCES
PETROLEUM CORPORATION
27200 TOURNEY RD STE 200
SANTA CLARITA CA 91355-4910

237 032 02 00 5
CALPORTLAND CO
PO BOX 371534
LAS VEGAS NV 89137

237 520 15 00 1
CALPORTLAND COMPANY
10655 W PARK RUN DR STE 275
LAS VEGAS NV 89144

237 213 14 00 9
CAMPBELL BRADLEY C TRUST
22394 MONTERA CT
SALINAS CA 93908-1024

237 520 10 00 6
CATINO FMLY TR
741 E HARMONY LN
FULLERTON CA 92831

237 093 46 00 8
WESTN NATURAL RESOURCES LLC
11455 EL CAMINO REAL STE 160
SAN DIEGO CA 92130

237 530 02 00 6
DUNYON GLADYS LIVING TRUST
1734 S FOREST OAK DR
BEAUMONT CA 92223-8574

237 520 06 00 5
GEDDES TOSHIKO
16250 MANTILLA RD
SAN DIEGO CA 92128

237 520 07 00 8
GIRARD MARY
2647 RED ARROW DR
LAS VEGAS NV 89135-1607

237 390 07 00 1
HEATH WILLIAM JOHN
39494 CARY RD
ANZA CA 92539-9131

237 520 23 00 4
HUTCHINSON L JAMES
1307 MILANO CI
DUNEDIN FL 34698

237 520 14 00 8
HYUNG YONG K & YONG
701 E HERMOSA DR
FULLERTON CA 92635

237 213 03 00 7
IRELL LAUREN REVOCABLE TRUST
717 S GRIFFITH PARK DR
BURBANK CA 91506-3003

237 213 04 00 0
IRELL LAUREN TRUST
717 S GRIFFITH PARK DR
BURBANK CA 91506-3003

237 520 17 00 7
MASCHMEYER WAYNE K REV
LIVING TRUST
387 V ST
SPRINGFIELD OR 97477

474 010 24 00 8
NASRALLAH JEFFREY
5923 WOODLAND VIEW DR
WOODLAND HILLS CA 91367-1075

237 520 05 00 2
NORELL WILLIAM E
2402 4TH ST # 12
SANTA MONICA CA 90405

237 370 04 00 6
WESTERN NATURAL RESOURCES
LLC
11455 EL CAMINO REAL STE 160
SAN DIEGO CA 92130

237 520 11 00 9
SOU CAL EDISON CO
14799 CHESTNUT ST
WESTMINSTER CA 92683-5240

237 211 23 00 1
SOUTHERN CALIFORNIA EDISON CO
2244 WALNUT GROVE AV
ROSEMEAD CA 91770-3714

237 520 22 00 1
TONG NHIEM & LY-HUONG
PO BOX 2411
LA HABRA CA 90632-2411

237 520 19 00 3
TROUT JAMES H & SANDRA A
110 FAIRWAY DR
NOVATO CA 94949

237 530 03 00 9
ALTA OAK REALTY LLC
437 MADISON AV FLR 22
NEW YORK NY 10022-7036

237 093 02 00 0
U S A
1600 PENNSYLVANIA AV NW
WASHINGTON DC 20500

237 032 32 00 2
UNION PACIFIC R/R CO
1400 DOUGLAS ST # 1610
OMAHA NE 68179-1610

237 091 19 00 6
UNION PACIFIC R/R CO
1400 DOUGLAS ST
OMAHA NE 68179-1610

Mojave Life of Mine Reclamation Plan
Amendment Project by CalPortland
Company (PP18108).
Agencies and Interested Parties

Northcutt and Associates
4220 Poplar Street
Lake Isabella, CA 93240-9536

State Department of Industrial Relations
CAL/OSHA – Mining & Tunneling
1750 Howe Avenue, Suite 450
Sacramento, CA 95825

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

Yuhaaviatam of San Manuel Nation
Attn: Alexandra McCleary, Cultural
Resources Mngmt Dept
26569 Community Center Drive
Highland, CA 92346

Harrison, Temblador Hungerford &
Guernsey
Attn. Adam Guernsey
1501 28th Street
Sacramento, CA 95816

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

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

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

237 370 03 00 3
WESTERN NATRUAL RESOURCES
LLC
11455 EL CAMINO REAL STE 160
SAN DIEGO CA 92130

So. California Edison, Third Party
Environmental Review
2244 Walnut Grove Ave.
GO-1, Quad 2C
Rosemead, CA 91770

MSHA/Field Office
991 Nut Tree Road
Vacaville, CA 95687

State Department of Industrial Relations
CAL/OSHA – Mining & Tunneling
6150 Van Nuys Blvd., Suite 310
Van Nuys, CA 91401

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

CalPortland Company
Attn. Alison Everhart
PO Box 146
Oro Grande, CA 92368

Benchmark Resources
Attn. Bob Delp
2515 East Bidwell Street
Folsom, CA 95630

Local Agency Formation Comm/LAFCO
5300 Lennox Avenue, Suite 303
Bakersfield, CA 93309

Bakersfield City Planning Dept
1715 Chester Avenue
Bakersfield, CA 93301

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

237 093 03 00 3
WESTERN NATURAL RESOURCES
LLC
4275 EXECUTIVE SQUARE STE 400
LA JOLLA CA 92037

Solveig A. Thompson
29200 Woodview Court
Tehachapi, CA 93561-7484

MSHA/District Office,
991 Nut Tree Road
Vacaville, CA 95687

California High-Speed Rail Authority
Attn. Stefan Galvez-Abadia
355 S. Grand Avenue, Suite 2050
Los Angeles, CA 90071

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

SESPE Consulting, Inc.
Attn. John Hecht
374 Poli Street, Suite 200
Ventura, CA 93001

Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220

Native American Heritage Commission
1550 Harbor Boulevard
West Sacramento, CA 95691

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

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

City of McFarland
401 West Kern Avenue
McFarland, CA 93250

City of Ridgecrest
100 West California Avenue
Ridgecrest, CA 93555

City of Shafter
336 Pacific Avenue
Shafter, CA 93263

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

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

City of Wasco
764 E Street
Wasco, CA 93280

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

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

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

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

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

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

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

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

U.S. Bureau of Land Management
Ridgecrest Field Office
300 South Richmond Road
Ridgecrest, CA 93555

China Lake Naval Weapons Center
Tim Fox, RLA - Comm Plans & Liaison
429 E Bowen, Building 981
Mail Stop 4001
China Lake, CA 93555

Edwards AFB, Mission Sustainability
Liaison
412 TW, Bldg 2750, Ste 117-14
195 East Popson Avenue
Edwards AFB, CA 93524

U.S. Fish & Wildlife Service
777 East Tahquitz Canyon Way, Suite 208
Palm Springs, CA 92262

Antelope Valley Resource Cons Dist
10148 West Avenue I
Lancaster, CA 93536

Eastern Kern Resource Cons Dist
300 South Richmond Road
Ridgecrest, CA 93555-4436

Tehachapi Resource Cons Dist
321 West "C" Street
Tehachapi, CA 93561-2011

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

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

U.S. Postal Service
Address Management Systems
28201 Franklin Parkway
Santa Clarita, CA 91383-9321

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

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

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

Caltrans/Dist 9
Planning Department
500 South Main Street
Bishop, CA 93514

State Clearinghouse
Office of Planning and Research
1400 - 10th Street, Room 222
Sacramento, CA 95814

State Dept of Conservation
Director's Office
715 "P" Street, MS 1900
Sacramento, CA 95814

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

Office of the State Geologist
Headquarters
715 "P" Street, MS 1901
Sacramento, CA 95814

State Dept of Conservation
Division of Land Resource Protection
715 "P" Street, MS 1904
Sacramento, CA 95814

State Dept of Conservation
Division of Mine Reclamation
715 "P" Street MS 1905
Sacramento, CA 95814

State Dept of Conservation
Dept. of Resources, Recycling, &
Recovery
P.O. Box 4025
Sacramento, CA 95812

State Mining and Geology Board
715 "P" Street, MS 1909
Sacramento, CA 95814

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

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

California Regional Water Quality
Control Board/Lahontan Region
15095 Amargosa Road - Bld 2, Suite 210
Victorville, CA 92394

Kern County Administrative Officer

Kern County Public Works Department/
Building & Development/Floodplain

Kern County Public Works Department/
Building & Development/Survey

Kern County
Env Health Services Department

Kern County Fire Dept (Put in FIRE BOX)
Regina Arriaga
Roxanne Routh
Jim Killam

Kern County Fire Dept
Aaron Duncan

Kern County Library/Beale
Local History Room

Kern County Library/Beale
Andie Sullivan

Kern County Library
Mojave Branch
15555 O Street
Mojave, CA 93501

Kern County Library
Tehachapi Branch
212 South Green St.
Tehachapi, CA 93561

Kern County Parks & Recreation

Kern County Sheriff's Dept
Administration

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

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

Kern County Public Works Department/
Building & Development/Code
Compliance

Mojave Unified School Dist
3500 Douglas
Mojave, CA 93501

Tehachapi Unified School Dist
300 S Robinson Street
Tehachapi, CA 93561

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

Local Agency Formation Comm/LAFCO
5300 Lennox Avenue, Suite 303
Bakersfield, CA 93309

Golden Hills Community Serv Dist
P.O. Box 637
Tehachapi, CA 93581

Tehachapi-Cummings Co Water Dist
P.O. Box 326
Tehachapi, CA 93561

Antelope Valley-East Kern
Water Agency
6500 West Avenue N
Palmdale, CA 93551

Kern County Water Agency
3200 Rio Mirada Drive
Bakersfield, CA 93308

Tehachapi City Hall/Airport
115 South Robinson Street
Tehachapi, CA 93561

East Kern Air Pollution
Control District

Adams, Broadwell, Joseph & Cardozo
Attention: Rachel Levine
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

U.S. Air Force
Attn: David Bell/AFCEC CZPW
Western Regional/Leg Branch
510 Hickam Avenue, Bld 250-A
Travis AFD, CA 94535-2729

U.S. Army
Attn: Daniel J. Saelens
G3 Force Integration
P.O. Box 105100
Fort Irwin, CA 92310

U.S. Army
Attn: Tim Kilgannon, Reg 9 Coord
Office of Strategic Integration
721 - 19th Street, Room 427
Denver, CO 80202

U.S. Navy
Attn: Steve Chung, Plans & Liaison
Officer
1220 Pacific Highway
San Diego, CA 92132-5190

U.S. Marine Corps
Command Gen MCIWEST-MCB CamPen
Attn: A/CS, G7
Box 555010, Bldg 1160, Rm 280
Camp Pendleton, CA 92055-5246

AT&T California
OSP Engineering/Right-of-Way
4901 Ashe Road
Bakersfield, CA 93313

Kern Audubon Society
Attn: Frank Bedard, Chairman
7612 Angela Ave
Bakersfield CA 93308

Center on Race, Poverty
& the Environment
5901 Christie Avenue, Suit 208
Emeryville, CA 94608

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

Defenders of Wildlife
P.O. Box 401
Folsom, CA 95763

Mojave Chamber of Commerce
P.O. Box 935
Mojave, CA 93502

Native American Heritage Council
of Kern County
Attn: Gene Albitre
18169 Highway 155
Woody, CA 93287

Beth Boyst
Pacific Crest Trail Program Manager
1323 Club Drive
Vallejo, CA 94592

Anitra Kass
Pacific Crest Trail Association
41860 Saint Annes Bay Drive
Bermuda Dunes, CA 92203

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

LIUNA
6800 District Boulevard
Bakersfield CA 93313

Southern California Edison
Planning Dept.
25625 West Rye Canyon
Valencia, CA 91355

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

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

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

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

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

Tejon Indian Tribe
Attn: Curtis Alcantar
4941 David Road
Bakersfield CA 93307

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

Tubatulabals of Kern County
Attn: Robert Gomez, Chairperson
P.O. Box 833
Weldon, CA 93283

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

Glenn Baumann
785 Tucker Road, No. G333
Tehachapi, CA 93561

Leadership Counsel for Justice &
Accountability
Attn: Emma De La Rosa
1522 18th Street
Bakersfield, CA 93301

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

Kevin Johnston
2476 Buena Vista Avenue
Livermore, CA 94550

Antelope Valley Resource
Conservation District
44811 North Date Ave., Ste. G
Lancaster, CA 93534

California Geological Survey
715 "P" Street, MS 1901
Sacramento, CA 95814

Office of the State Geologist
Headquarters
715 "P" Street, MS 1901
Sacramento, CA 95814

Tehachapi Recreation
and Parks District
490 West D Street
Tehachapi, CA 93561

Southern California Edison
Planning Dept. 421 West J Street
Tehachapi, CA 933561

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 # 2024081205

Project Title: Mojave Life of Mine Reclamation Plan Amendment Project by CalPortland Company

Lead Agency: Kern County Planning and Natural Resources Department

Contact Person: Randall Cates

Mailing Address: 2700 "M" Street, Suite 100

Phone: (661) 862-8612

City: Bakersfield

Zip: 93301

County: Kern

Project Location: County: Kern

City/Nearest Community: Tehachapi

Cross Streets: Tehachapi Willow Springs Road and Oak Creek Road

Zip Code: 93501

Lat. / Long. : 35° 2' 6.64214" N/ 118° 19' 4.63056" W

Total Acres: Approximately 4,367 acres

Assessor's Parcel No.: 237-032-01, 237-053-01, 237-071-02, 237-071-03, 237-071-04, 237-071-07, 237-073-01, 237-073-02, 237-091-01,

237-091-02, 237-091-04, 237-091-05, 237-091-17, 237-093-01, 237-101-06, 237-102-01

Section: Sections 19 and 30 / Sections 13-15, 23-28, 33 and 34

Township: 11N Range: 13W / 14W Base: San Bernardino Base and Meridian (SBB&M)

Within 2 Miles: State Hwy #: N/A

Waterways: multiple ephemeral drainage features, including Oak Creek

Airports: N/A

Railways: Union Pacific Railroad

Schools: N/A

Document Type:

CEQA: ☐ NOP
☐ Early Cons
☐ Neg Dec
☐ Mit Neg Dec

☒ Draft EIR
☐ Supplement/Subsequent EIR
(Prior SCH No.) _____
Other _____

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: _____

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 _____ MW _____
☐ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☒ Other: Reclamation

Project Issues Discussed in Document:

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

Present Land Use / Zoning / General Plan Designation

Vacant land, Wind turbines, vested limestone and construction materials mining, processing, and cement production facility / Zoning: A (Exclusive Agriculture), A WE (Exclusive Agriculture, Wind Energy Combining), A-1 (Limited Agriculture), A-1 FP (Limited Agriculture, Floodplain Combining), A-1 WE (Limited Agriculture, Wind Energy Combining), M-3 (Heavy Industrial), M-3 FP (Heavy Industrial, Floodplain Combining), M-3 WE (Heavy Industrial, Wind Energy Combining), E(20) RS (Estate – 20 acres, Residential Suburban Combining), NR(20) (Natural Resource – 20 acres), FPP (Floodplain Primary) / Kern County General Plan: 7.3 (Heavy Industrial), 7.3/2.4 (Heavy Industrial – Steep Slope), 7.3/2.5 (Heavy Industrial – Flood Hazard), 8.2 (Resource Reserve), 8.2/2.4 (Resource Reserve – Steep Slope), 8.4 (Mineral and Petroleum), 8.4/2.4 (Mineral and

Project Description:

The proposed Mojave Life of Mine Reclamation Plan Amendment Project consists of reclamation activities, such as recontouring, stabilizing, revegetation, and monitoring of final slopes and disturbed mining areas; reclamation of roads and ancillary equipment and facilities; and removal of the processing and cement plant facilities within the approximately 4,367-acre proposed project site. Although some reclamation activities are and would continue to be performed concurrent with ongoing mining and processing, reclamation activities for final site reclamation would occur after the completion of mining and processing operations.

On March 15, 2021, the Kern County Planning and Natural Resources Department determined that mining and processing activities are a legal nonconforming (vested) use on approximately 6,658 acres of land owned by the project proponent, inclusive of the approximately 4,367 acres covered by the proposed project. As such, vested and continuing mining activities such as drilling, blasting, material recovery, material movement (with the exception of material movement pertaining to reclamation, e.g. redistribution of stockpiled growth media to aid in revegetation efforts), processing, cement production, and material transport for sale are not subject to discretionary approval by Kern County, and as such are not part of the proposed project. The project proponent proposes to continue to develop its limestone and construction materials resources within the existing vested properties and to increase the life of the mine by approximately 200 years to continue cement and construction materials production. The proposed project would not involve changes to the existing vested mining operations including, for example, production levels, mining systems or processes, and ultimate throughput from the cement plant.

Reclamation of continued operations would require the approval of the proposed project which would amend the approximately 1,542-acre existing reclamation plan (approved in 1979) through approval of the proposed approximately 4,367-acre reclamation plan applicable to the vested properties.

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".

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

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

Starting Date April 17th, 2026 Ending Date June 2nd, 2026

Lead Agency (Complete if applicable):

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

Signature of Lead Agency Representative:  4/17/2026

Randall Cates, Planner III

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

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Draft Environmental Impact Report

SCH# 2024081205

Volume 1

Chapters 1 through 11

MOJAVE LIFE OF MINE RECLAMATION PLAN AMENDMENT PROJECT
by CalPortland Company.
(PP18108)

CUP No. 21, Map 197; CUP No. 46, Map 198



Kern County
Planning and Natural Resources Department
Bakersfield, CA

April 2026

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The following Appendices are included on the digital media that is inserted in the front cover of this EIR.

VOLUME 2

Appendix A: Notice of Preparation and Comment Letters

Appendix A.1: Notice of Preparation

Appendix A.2: Scoping Meeting Summary

Appendix A.3: Notice of Preparation/Initial Study Comments

Appendix B: Mojave Life of Mine Reclamation Plan Amendment

VOLUME 3

Appendix C: Air Quality and Greenhouse Gas Assessment Mojave Life of Mine Reclamation Plan Amendment

Appendix D: Biological Resources Studies

Appendix D.1: Baseline Biological Survey Report Mojave Life of Mine Reclamation Plan Amendment

Appendix D.2: Mojave Life of Mine Reclamation Plan Amendment Delineation of State and Federal Jurisdictional Waters

Appendix D.3: Desert Tortoise Focused Survey and Report Mojave Reclamation Project

Appendix E: Cultural Resources Studies

Appendix E.1: A Phase I Cultural Resources Inventory for the Mojave Mine Life Project (redacted version)

Appendix E.2: Phase II Cultural Resources Eligibility Evaluations, CalPortland Mojave Facility Project (redacted version)

Appendix F: Energy Analysis Memorandum - CalPortland Company, Proposed Mojave Mine Reclamation Plan Amendment

Appendix G: Geological Studies

Appendix G.1: Slope Stability Assessment for Mojave Life of Mine Reclamation Plan Amendment, CalPortland Mojave Cement Plant

Appendix G.2: Mojave Mine Paleontological Analysis & CEQA Implications

VOLUME 4**Appendix H:** Phase I Environmental Site Assessment – CalPortland Cement Company**Appendix I:** Hydrology and Water Quality Studies

Appendix I.1: Water Supply Assessment - Mojave Life of Mine Reclamation Plan Amendment Project

Appendix I.2: Estimated Reclamation Water Use for the CalPortland Mojave Life of Mine Reclamation Plan Amendment Project

Appendix I.3: Mojave Overburden Sampling Results Memo

Appendix I.4: Water Quality Memorandum for the Mojave Life of Mine Reclamation Plan Amendment Project

Appendix I.5: Drainage Report for CalPortland Company Mojave Quarry

Appendix J: Noise Analysis Memorandum – CalPortland Company, Proposed Mojave Mine Reclamation Plan Amendment**Appendix K:** CEQA Transportation and Vehicle Miles Travelled (VMT) Memorandum – CalPortland Company, Proposed Mojave Mine Reclamation Plan Amendment**Appendix L:** Wildfire Resource Analysis Memorandum – CalPortland Company, Proposed Mojave Mine Reclamation Plan Amendment

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Chapter 1

Executive Summary

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1.1 Introduction

The Mojave Life of Mine Reclamation Plan Amendment Project (project) is a proposal by CalPortland Company (CalPortland; the project proponent) requesting the following discretionary action from Kern County:

- (a) approval of CUP No. 21, Map 197 and CUP No. 46, Map 198 authorizing a reclamation plan amendment for the Mojave Mine (CA Mine ID No. 91-15-0032) that would supersede the existing 1979 reclamation plan and would provide for reclamation of up to approximately 4,367 acres of mined vested lands in accordance with the Surface Mining and Reclamation Act (SMARA) of 1975 and Kern County Municipal Code Chapter 19.100.

The Mojave Mine is an existing limestone and construction materials mining, processing, and cement production facility located as shown on **Figure 1-1, Site Vicinity**. The proposed project is a reclamation plan that would cover approximately 4,367 acres and would supersede the existing 1979 reclamation plan which covers approximately 1,542 acres as shown on **Figure 1-2, Assessor's Parcels, Existing Reclamation Plan Boundaries, Proposed Reclamation Plan Boundaries, and Vested Facility Boundaries**. **Figure 1-3, Aerial Photograph Map**, shows a birds-eye view of the project site. **Figure 1-4, Proposed Final Reclaimed Conditions**, illustrates the reclaimed site features and conditions under the proposed project. **Figure 3-6, Site Overview Existing Conditions**, illustrates the overall existing site conditions, and **Figure 3-7, Proposed Final Maximum Extent of Excavation**, illustrates the maximum extent of excavation. Corresponding cross sections of contours for proposed final reclaimed conditions are illustrated on **Figure 3-9, Proposed Reclamation Cross-Sections (A-F)**, **Figure 3-10, Proposed Reclamation Cross-Sections (G-K)**, and **Figure 3-11, Proposed Reclamation Cross-Sections (L-O)**.

A draft Environmental Impact Report (EIR) has been prepared by Kern County as the Lead Agency under the California Environmental Quality Act (CEQA). The EIR provides information about the environmental setting and impacts of the project and alternatives. It informs the public about the project and its impacts and provides information to meet the needs of federal, state, and local permitting agencies that are required to consider the project. The EIR will be used by Kern County to determine whether to approve the requested project entitlements.

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

The proposed project is located in an unincorporated area of the southeastern part of Kern County, approximately 6 miles southeast of the City of Tehachapi and 7.25 miles west of the unincorporated community of Mojave. The project site is approximately 4,367 acres, wholly or within a portion of sixteen privately owned parcels identified as Kern County Assessor's Parcel Numbers (APNs):

237-032-01	237-071-04	237-091-01	237-091-17
237-053-01	237-071-07	237-091-02	237-093-01
237-071-02	237-073-01	237-091-04	237-101-06
237-071-03	237-073-02	237-091-05	237-102-01

In accordance with SMARA, the County approved a reclamation plan for the facility in 1979 which prescribes reclamation requirements covering approximately 1,542 acres of lands within the project site including mined areas and areas associated with the cement plant. In 2021, the County recognized that mining and processing activities are a legal nonconforming (vested) use on approximately 6,658 acres of land owned by the project proponent, inclusive of the approximately 1,542 acres covered by the 1979 reclamation plan; however the right to continue surface mining operations is subject to a County-approved and valid Reclamation Plan and adequate Financial Assurances.

The project proponent proposes to continue to develop its limestone and construction materials resources within the existing vested properties and to continue the life of the mine by approximately 200 years to meet and maintain the market quality and quantity requirements by utilizing additional material reserves to continue cement and construction materials production. Reclamation of continued operations would require the County's approval of the proposed project which would amend the existing 1979 reclamation plan through approval of a reclamation plan applicable to approximately 4,367 acres of the vested properties, inclusive of the approximately 1,542 acres currently subject to the 1979 reclamation plan, and an additional approximately 2,825 acres that would be added to the reclamation plan boundary through the proposed amendment. The total amended reclamation plan would cover approximately 4,367 acres.

Upon cessation of mining activities, the proposed reclamation plan provides for areas within the reclamation plan boundary to be reclaimed and revegetated with native species and reclaimed to open space. Proposed reclamation described in the reclamation plan includes recontouring, stabilizing, revegetation, and monitoring of final slopes and disturbed mining and stockpile areas; reclamation of roads not required for post-reclamation access and security, removal of ancillary equipment and facilities; and removal of the processing and cement plants. Removal of existing rail facilities and wind turbines would not be required under the proposed reclamation plan.

1.2 Purpose and Use of the Draft EIR

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

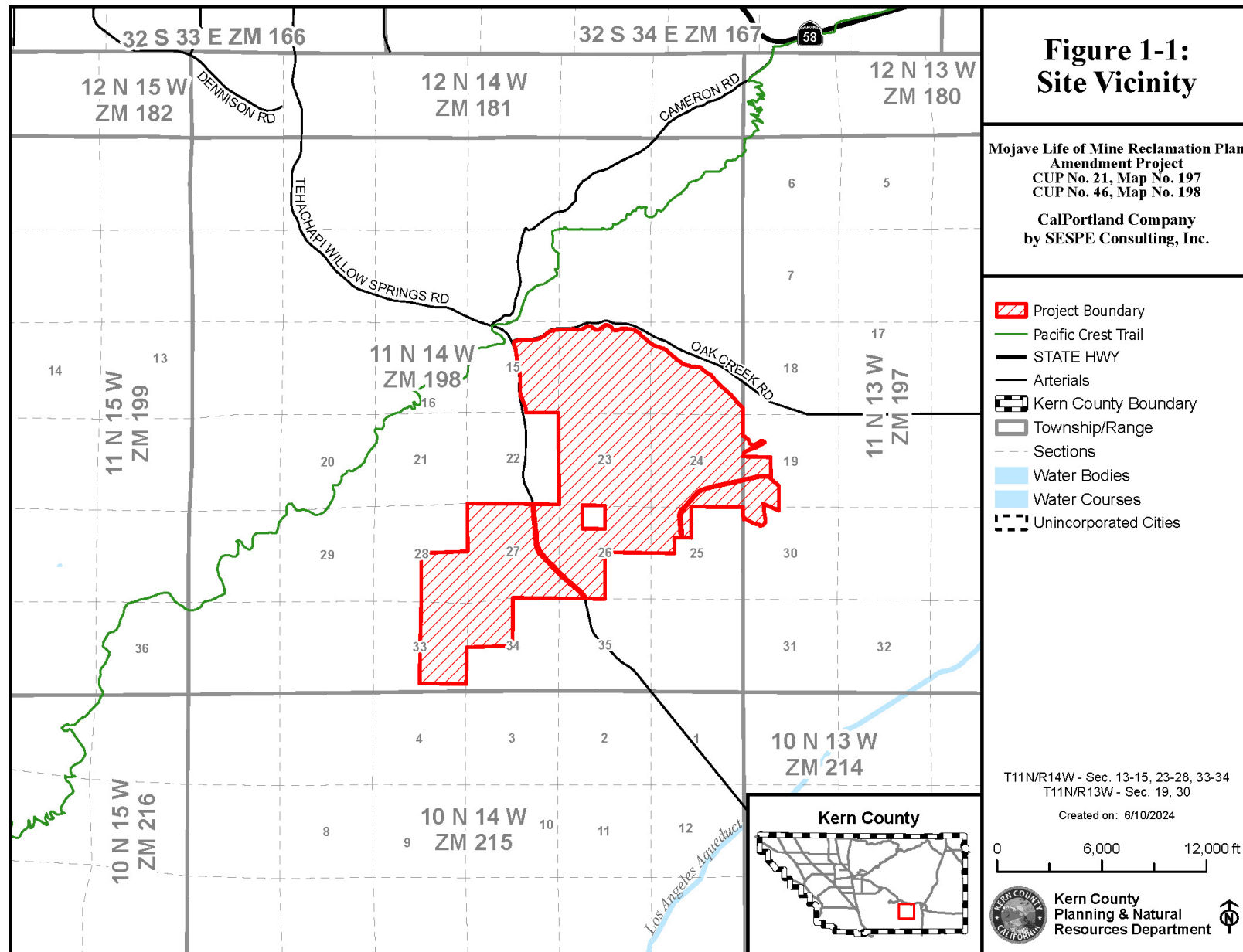
- The significant potential impacts of the project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated;
- Any unavoidable adverse impacts that cannot be mitigated; and
- Reasonable and feasible alternatives to the project that would eliminate any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

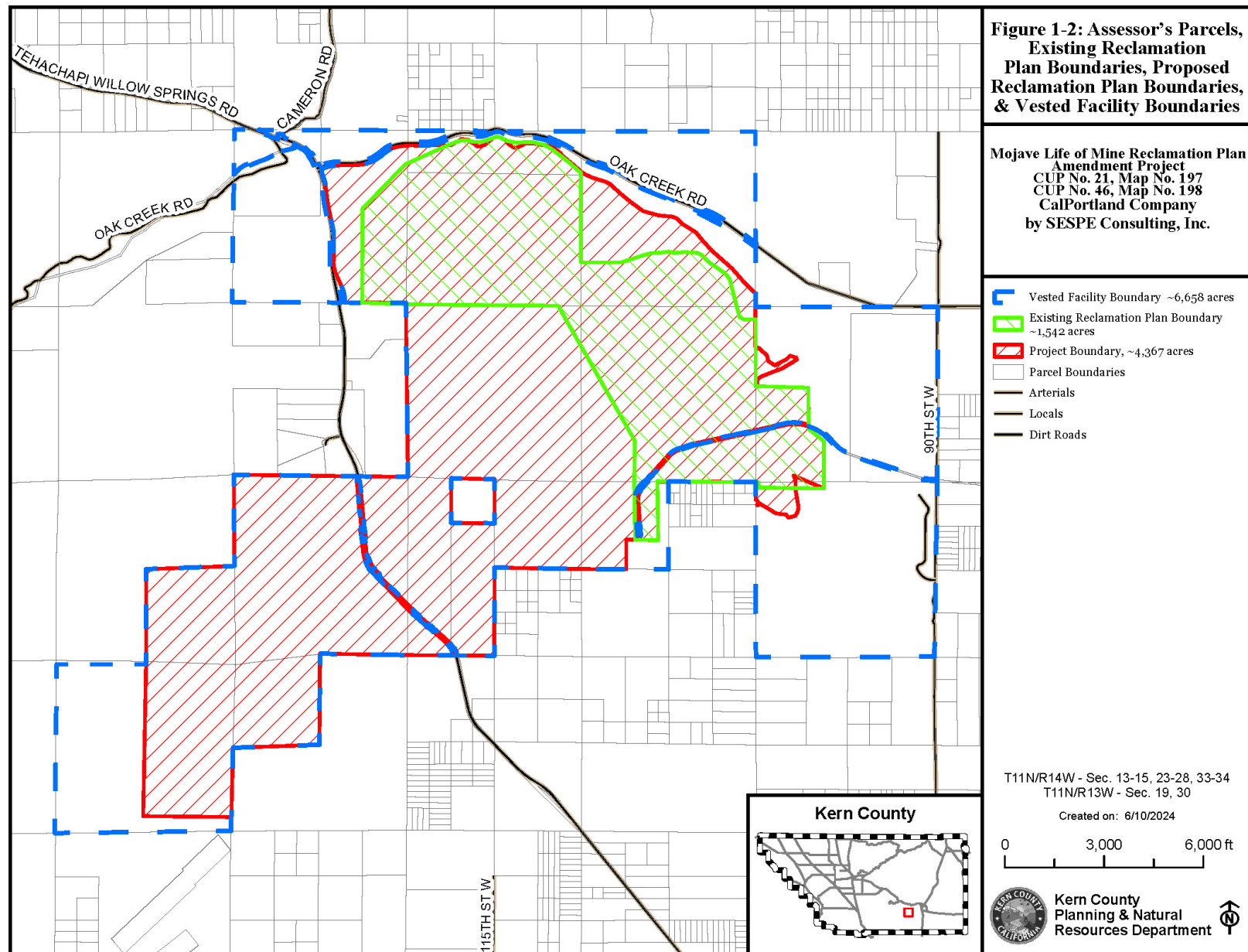
An EIR also discloses growth-inducing impacts, impacts found not to be significant, and significant cumulative impacts of past, present, and reasonably anticipated future projects. CEQA requires an EIR be prepared that reflects the independent judgment of the Lead Agency regarding the impacts, the level of significance of the impacts both before and after mitigation, and mitigation measures proposed to reduce the impacts. A draft EIR is circulated to responsible agencies, trustee agencies with resources potentially affected by the project, and interested agencies and individuals. The purposes of public and agency review of a draft EIR include sharing expertise, disclosing agency analyses, checking for accuracy, detecting omissions, discovering public concerns, and soliciting counterproposals. Reviewers of a draft EIR are requested to focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate significant environmental effects.

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

1.3 Project Overview

This section describes the project location and setting, surrounding land uses, project objectives, and project characteristics. The project is described in further detail in **Chapter 3, Project Description**.





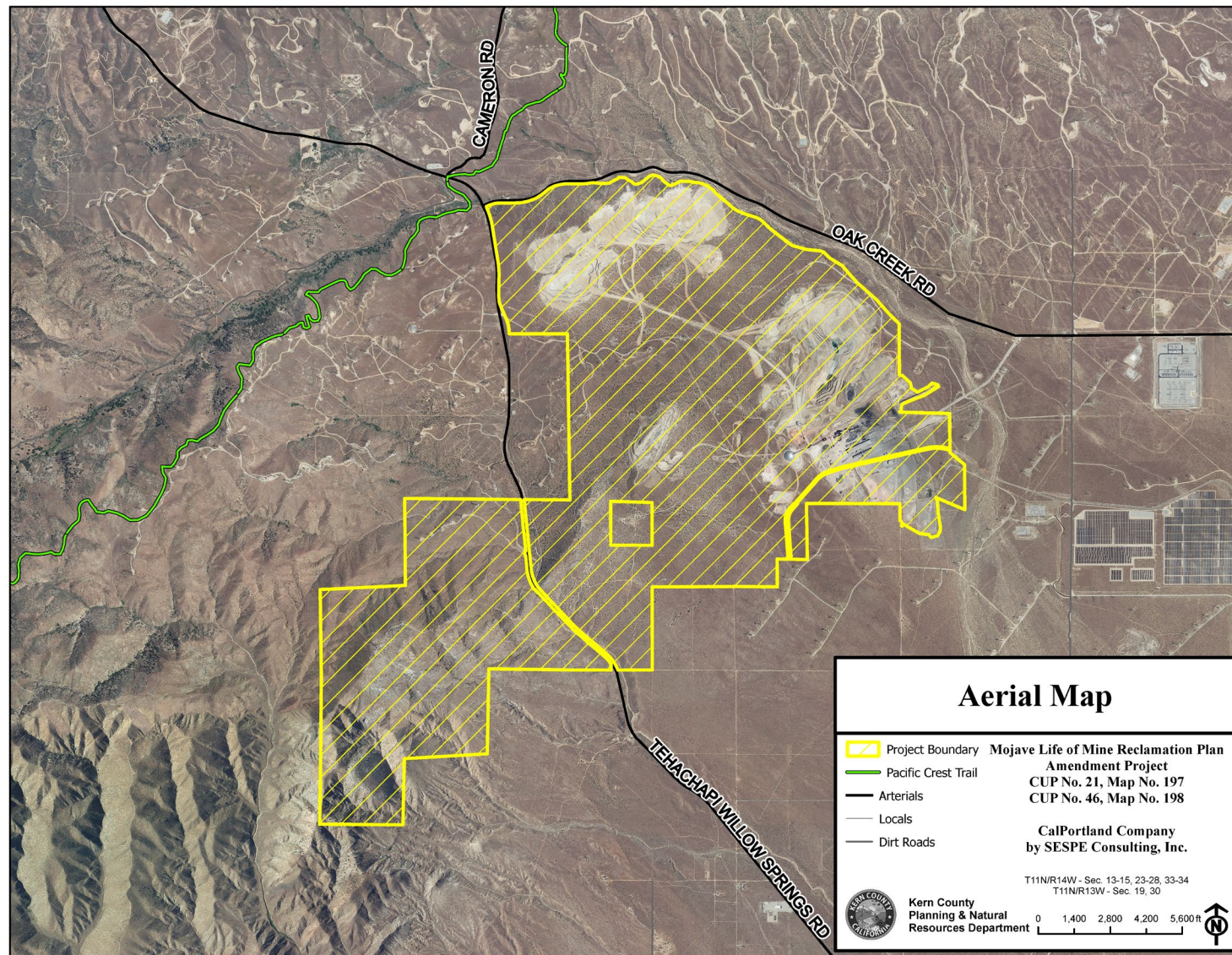
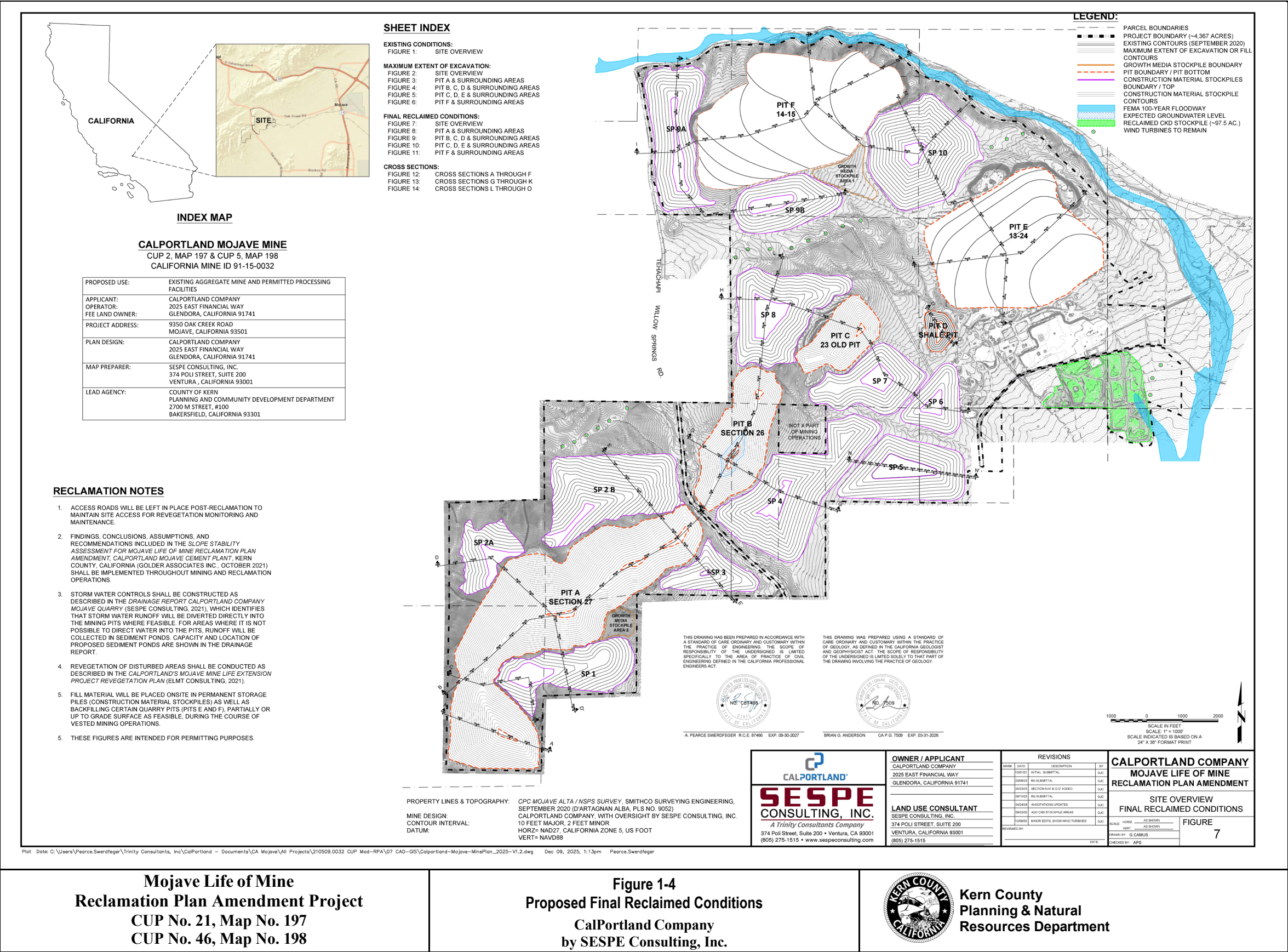


Figure 1-3
Aerial Photograph Map



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1.3.1 Local and Regional Setting

The project site is located in an unincorporated area of the southeastern part of Kern County, approximately 6 miles southeast of the City of Tehachapi and 7.25 miles west of the unincorporated community of Mojave. The project site is bounded on the north by Oak Creek Road and is bisected by Tehachapi Willow Springs Road. The portion of the project site east of Tehachapi Willow Springs Road is accessed from an existing approximately 1-mile-long private access road that connects to Oak Creek Road approximately 3.5 miles east of Tehachapi Willow Springs Road. Access to the project site west of Tehachapi Willow Springs Road is via an existing access point along Tehachapi Willow Springs Road which bisects the southwestern portion of the site; an additional access point along Tehachapi Willow Springs Road to provide access to the project site west of Tehachapi Willow Springs Road may potentially be established in the future at a location yet to be determined.

The existing land use, General Plan Land Use Designations, and Zoning Classifications for the project site are identified in **Table 1-1, Project Assessor Parcel Numbers, Existing General/Specific Plan Map Code, Zoning, and Approximate Acreages**, and shown on **Figure 1-5, Existing General/Specific Plan Designations**, and **Figure 1-6, Existing Zoning Classifications**.

Table 1-1 Project Assessor Parcel Numbers, Existing General/Specific Plan Map Code, Zoning, and Approximate Acreages

Count	APN	Zone Map	General/Specific Plan	General/Specific Plan Map Code Designation	Existing Zoning	Approximate Acres of APN	Acreage of the Project Site which is within the APN
1.	237-032-01	197	KCGP	7.3, 7.3/2.5	M-3, M-3 WE, A-1, A-1 WE, A-1 FP	356.33	128.77
2.	237-053-01	198	KCGP	7.3, 7.3/2.5	M-3, M-3 FP	663.46	26.31
3.	237-071-02	198	KCGP/CCSP	KCGP: 8.4, 8.4/2.4 CCSP: 8.4/2.4, 8.4/2.6	E(20) RS, NR (20)	455.12	224.06
4.	237-071-03	198	KCGP/CCSP	KCGP: 8.4, 8.4/2.5 CCSP: 8.2/2.5, 8.4/2.4, 8.4/2.6	A-1, NR(20), FPP	142.51	99.24
5.	237-071-04	198	KCGP/CCSP	KCGP: 8.4, 8.4/2.4 CCSP: 8.4/2.4, 8.4/2.6	A-1, NR(20), A WE	479.68	479.68
6.	237-071-07	198	KCGP/CCSP	8.4, 8.4/2.4, 8.4/2.5 CCSP: 8.4/2.6	A-1, A WE	625.46	304.18

Table 1-1 Project Assessor Parcel Numbers, Existing General/Specific Plan Map Code, Zoning, and Approximate Acreages

Count	APN	Zone Map	General/Specific Plan	General/Specific Plan Map Code Designation	Existing Zoning	Approximate Acres of APN	Acreage of the Project Site which is within the APN
7.	237-073-01	198	KCGP	7.3, 7.3/2.4	M-3, M-3 WE	638.28	637.94
8.	237-073-02	198	KCGP	8.4, 8.4/2.4	A-1, A WE	639.65	639.20
9.	237-091-01	198	KCGP	8.2, 8.2/2.4, 8.4, 8.4/2.4	A, A WE	647.44	646.14
10.	237-091-02	198	KCGP	8.4, 8.4/2.4	A, A WE	157.16	157.06
11.	237-091-04	198	KCGP	8.4, 8.4/2.4	A, A WE	118.7	118.57
12.	237-091-05	198	KCGP	8.4	A, A WE	160.21	159.74
13.	237-091-17	198	KCGP	8.4	A WE, A-1, A-1 WE	155.93	115.81
14.	237-093-01	198	KCGP	8.5/2.4	A	156.65	153.99
15.	237-101-06	198	KCGP	8.2/2.4	A	179.29	177.51
16.	237-102-01	198	KCGP	8.5/2.4	A	633.3	285.48

Notes:*Kern County Zoning District:*

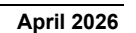
A (Exclusive Agriculture)
A WE (Exclusive Agriculture, Wind Energy Combining)
A-1 (Limited Agriculture)
A-1 FP (Limited Agriculture, Floodplain Combining)
A-1 WE (Limited Agriculture, Wind Energy Combining)
M-3 (Heavy Industrial)
M-3 FP (Heavy Industrial, Floodplain Combining)
M-3 WE (Heavy Industrial, Wind Energy Combining)
E(20) RS (Estate – 20 acres, Residential Suburban Combining)
NR(20) (Natural Resource – 20 acres)
FPP (Floodplain Primary)

Kern County General Plan (KCGP) Map Code Designation:

7.3 (Heavy Industrial)
7.3/2.4 (Heavy Industrial - Steep Slope)
7.3/2.5 (Heavy Industrial – Flood Hazard)
8.2 (Resource Reserve)
8.2/2.4 (Resource Reserve – Steep Slope)
8.4 (Mineral and Petroleum)
8.4/2.4 (Mineral and Petroleum – Steep Slope)
8.4/2.5 (Mineral and Petroleum – Flood Hazard)
8.5/2.4 (Resource Management – Steep Slope)

Cameron Canyon Specific Plan (CCSP) Map Code Designation:

8.2/2.5 (Resource Reserve – Flood Hazard)
8.4/2.4 (Mineral and Petroleum – Steep Slope)
8.4/2.6 (Mineral and Petroleum – Erosion Hazard)



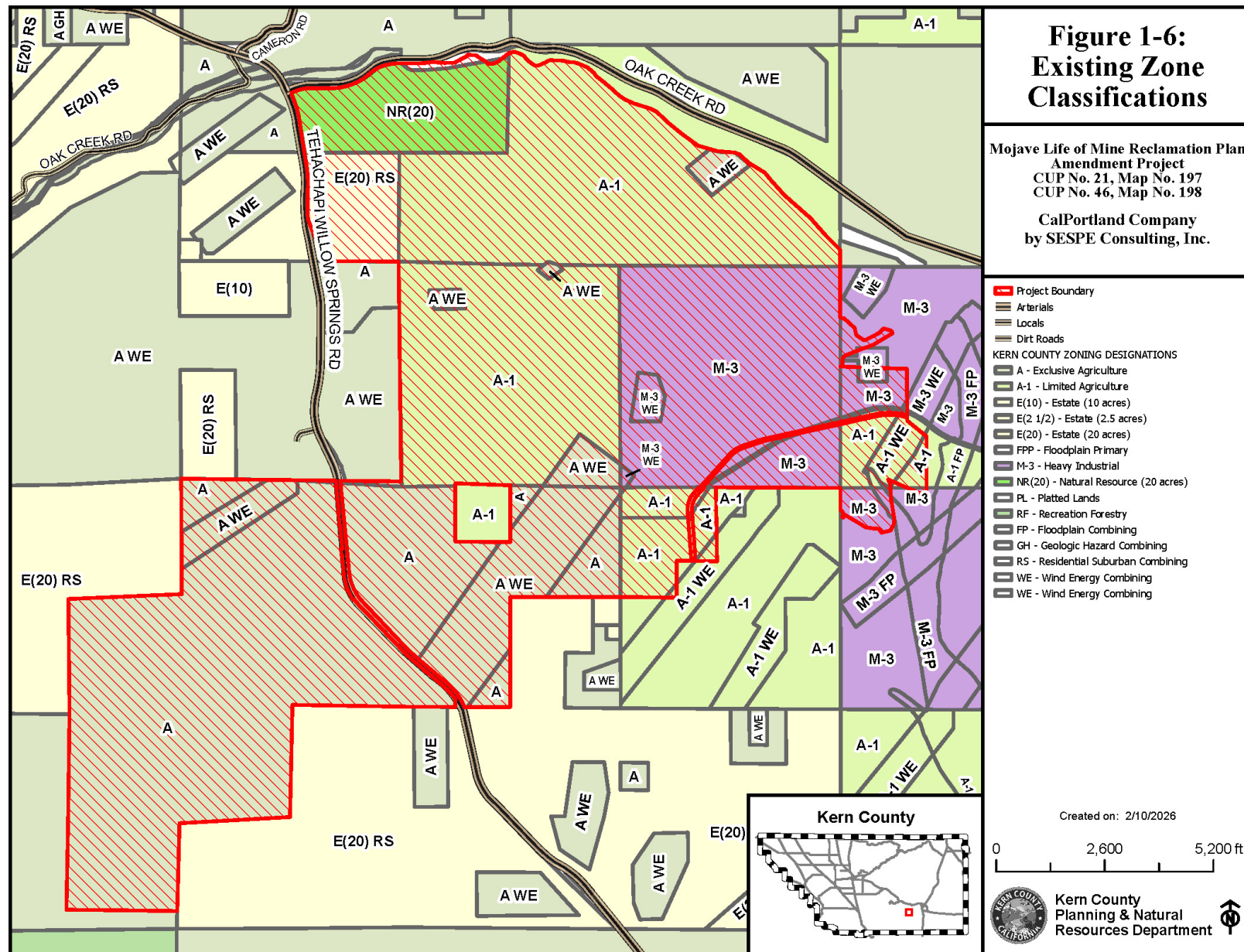


Table 1-2, *Proposed Project Site and Surrounding Land Uses*, demonstrates the existing land use of the proposed project site and surrounding areas.

Table 1-2 Proposed Project Site and Surrounding Land Uses

Location	Existing Land Use
Project Site	Industrial (mineral resource extraction, cement manufacturing and shipping), Renewable Energy Generation (wind), Vacant Land. Bisected by Tehachapi Willow Springs Road
North	Oak Creek Road, Renewable Energy Generation (wind), Vacant Land
South	Renewable Energy Generation (wind), Vacant Land
East	Renewable Energy Generation (wind and solar), Vacant Land
West	Renewable Energy Generation (wind), Vacant Land

The surrounding land uses consist of open space, dispersed rural residences, renewable energy generation (i.e., wind turbines and solar facilities), and other mining and industrial uses. Sensitive receptors located in the vicinity of the project site consist of rural residential dwellings located at varying distances from the proposed project site. The nearest identified sensitive receptors are a residence located 5,400 feet south of the project site west of Tehachapi Willow Springs Road, a residence located approximately 5,500 feet northwest of the project site adjacent to Tehachapi Willow Springs Road, a residence located approximately 6,450 feet north of the project site adjacent to Cameron Canyon Road, and residence/commercial facility located approximately 7,400 feet south of the project site west of Tehachapi Willow Springs Road. The Pacific Crest Trail at its nearest point is approximately 600 feet northwest of the northwest corner of the project site near the Tehachapi Willow Springs Road / Oak Creek Road intersection.

An approximately 40-acre parcel of land under federal ownership administered by the U.S. Bureau of Land Management (BLM) is located centrally within the exterior boundaries of the project site, however it is not part of the project site. Nothing about the BLM access rights to their aforementioned parcel (the northeast quarter of the northwest quarter of Township 11 North, Range 14 West (T11N, R14W), San Bernardino Base and Meridian (SBB&M)) will be changed because of the proposed project.

1.3.2 Project Objectives

The proposed project is intended to achieve the following objectives as identified by the project proponent:

- To amend the 1979 reclamation plan to include the reclamation of mineral recovery activities within portions of the vested facility.
- To comply with SMARA's reclamation and financial assurance requirements for certain areas included in the vested facility that are not included in the 1979 reclamation plan.
- To allow the project proponent to continue reclamation of mineral recovery activities within portions of its vested facility so that the project proponent can continue to

provide suitable quantities of quality feedstock for its existing cement plant in order to serve market demand.

- To allow the project proponent to efficiently manage overburden generated during mining operations.
- To make vested reserves and operational areas within the facility available, subject to reclamation requirements under SMARA and the County's surface mining ordinance, to the project proponent.
- To provide for a source of suitable feedstock located as close as possible to the project proponent's existing cement plant in order to avoid the impacts and costs of trucking feedstock long distances.
- To allow the project proponent to continue to provide local high-paying employment opportunities and other economic benefits to the community.

1.4 Environmental Impacts

State CEQA *Guidelines* Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various, possible, new significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. Kern County has engaged the public to participate in the scoping of the environmental document.

The contents of this draft EIR were established based on a Notice of Preparation (NOP) prepared in accordance with the State CEQA *Guidelines*, as well as public and agency input that were received during the scoping process. Comments on the NOP are found in **Appendix A, Notice of Preparation and Comment Letters**, of this document. Based on the findings of the NOP and the results of scoping, a determination was made that this EIR must contain a comprehensive analysis of environmental issues identified in Appendix G of the State CEQA *Guidelines*, with the exception of the two resource topics identified in Section 1.4.1, below, for which the NOP concluded that no impact would occur as a result of the proposed project.

1.4.1 Impacts Not Further Considered in this EIR

As discussed in the NOP (see **Appendix A** of this EIR), the project was determined to have no impact with regard to the following resource areas, which are therefore not analyzed in this EIR:

- Recreation
- Population and Housing

1.4.2 Impacts of the Proposed Project

Sections 4.1 through 4.18 in **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures**, provide a detailed discussion of the environmental setting, impacts associated with the project, and mitigation measures designed to reduce significant impacts to less-than-significant levels, when feasible. The impacts, mitigation measures, and residual impacts for

the project are summarized in **Table 1-4, Summary of Impacts, Mitigation Measures, and Levels of Significance**, located at the end of this chapter, and are discussed further below.

Impacts related to the following resource areas are evaluated in this EIR for their potential significance:

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Public Services
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

Less than Significant Impacts

Table 1-3, Summary of Project Impacts that are Less than Significant or Less than Significant with Mitigation, presents those impacts of the project that were determined to be less than significant by themselves, or less than significant with implementation of mitigation measures. Less than significant cumulative impacts are also included in this table. Sections 4.1 through 4.18 of this EIR present detailed analyses of these impacts and describe the means by which the mitigation measures listed in **Table 1-3** would reduce impacts to a less-than-significant level.

Table 1-3 Summary of Project Impacts that are Less than Significant or Less than Significant with Mitigation

Impact	Mitigation Measures
Aesthetics (Project and Cumulative)	MM 4.1-1 through 4.1-3
Agricultural and Forestry Resources (Project and Cumulative)	Mitigation is not required
Air Quality (Project and Cumulative)	MM 4.3-1 through MM 4.3-7
Biological Resources (Cumulative)	MM 4.4-1 through 4.4-11
Cultural Resources (Project and Cumulative)	MM 4.5-1 through MM 4.5-3
Energy (Project and Cumulative)	Mitigation is not required
Geology and Soils (Project and Cumulative)	MM 4.7-1 through 4.7-3, and MM 4.10-1
Greenhouse Gas Emissions (Project and Cumulative)	Mitigation is not required
Hazards and Hazardous Materials (Project and Cumulative)	MM 4.9-1 through MM 4.9-6

Table 1-3 Summary of Project Impacts that are Less than Significant or Less than Significant with Mitigation

Impact	Mitigation Measures
Hydrology and Water Quality (Project and Cumulative)	MM 4.10-1 through MM 4.10-2
Land Use and Planning (Project and Cumulative)	Mitigation is not required
Mineral Resources (Project and Cumulative)	Mitigation is not required
Noise (Project and Cumulative)	MM 4.13-1 through MM 4.13-2
Public Services (Project and Cumulative)	Mitigation is not required
Transportation (Project and Cumulative)	Mitigation is not required
Tribal Cultural Resources (Project and Cumulative)	MM 4.5-1 through MM 4.5-3
Utilities and Service Systems (Project and Cumulative)	MM 4.10-1 and MM 4.17-1
Wildfire (Project and Cumulative)	MM 4.7-1 through 4.7-2, MM 4.9-5, and MM 4.10-1 through 4.10-2

1.4.3 Significant and Unavoidable Impacts

CEQA Guidelines Section 15126.2(b) requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the project and proposed mitigation measures are discussed in detail in Chapter 4 of this EIR.

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

This EIR has considered potential project-specific impacts and potential cumulative effects of the project along with other current and reasonably foreseeable projects. The following project level impact is identified as significant and unavoidable and no cumulative impacts are identified as significant and unavoidable:

- Biological Resources

Table 1-4, *Summary of Significant and Unavoidable Project-Level and Cumulative Impacts*, summarizes the significant and unavoidable impact of the project.

Table 1-4 **Summary of Significant and Unavoidable Project-Level and Cumulative Impacts**

Resource	Project-Level Impact	Cumulative Impact	Mitigation Measures
Biological	The project would have a substantial adverse effect on jurisdictional waters of the State and streambeds and the project would have a substantial adverse effect on western Joshua tree (<i>Yucca brevifolia</i>).	None.	MM 4.4-10 and MM 4.4-11.

Table 1-6, *Summary of Project Impacts that are Less than Significant or Less than Significant with Mitigation*, at this end of this chapter presents the impact and includes the full text of mitigation measures. **Section 4.4**, *Biological Resources*, of this EIR present detailed analyses of this impact and describes the means by which the mitigation measures listed in **Table 1-6** would reduce the severity of the impact to the extent feasible.

1.4.4 Significant Cumulative Impacts

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

As presented above in **Table 1-6**, *Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation*, none of the project impacts were found to be significant and unavoidable at the cumulative level.

1.4.5 Growth Inducement

Evaluation of the growth-inducing impacts of the project is based on a qualitative analysis of the direct impacts associated with implementation of the project and the indirect impacts that could result from the project. This evaluation of potential growth-inducing impacts addresses whether the project would directly or indirectly:

- foster economic, population, or housing growth;
- remove obstacles to growth;
- increase population growth that would tax community service facilities; or
- encourage or facilitate other activities that cause significant environmental impacts.

State CEQA *Guidelines* Section 15126.2(e) states specifically, “It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.” In other words, growth inducement is not to be considered adverse *per se*; impacts on resources resulting from growth may be too far removed from the actions of the agency to require mitigation by the agency. The goal of the EIR in this regard, therefore, is one of disclosure.

There are no growth-inducing impacts of the proposed project identified in **Chapter 5, *Consequences of Project Implementation***, of this EIR.

1.4.6 Irreversible Impacts

State CEQA *Guidelines* Section 15126.2(d) defines an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of the project. Irreversible impacts can also result from damage caused by environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified. The project would irretrievably commit materials and energy to reclamation activities. Resources that would likely be consumed as part of the development of the proposed project would include, but are not limited to, oil, gasoline, diesel fuel, and other petroleum products for operation of project-related vehicles and equipment; water to be used for dust suppression; and other consumable products used during reclamation activities. Irreversible impacts associated with the proposed project are discussed in detail in **Chapter 5, *Consequences of Project Implementation***, of this EIR.

1.5 Alternatives to the Proposed Project

State CEQA *Guidelines* Section 15126.6 states that an EIR must address “a range of reasonable alternatives to the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” Based on the significant and unavoidable biological impacts of the project, and in consideration of the objectives of the proposed project, the following alternatives were considered as summarized below and discussed in detail in **Chapter 6, *Alternatives***.

1.5.1 Alternatives Eliminated from Further Consideration

Kern County considered several alternatives to reduce the project’s environmental impacts. In identifying potential alternatives, potential alternative project locations were considered. Because the project is reclamation of vested mining areas, an alternative location is infeasible for this project as the reclamation project must be located at the site of vested mining operations. For this reason, the Lead Agency has eliminated alternative locations from further consideration in the alternatives analysis.

Kern County also initially considered whether it would be feasible to require the project proponent to dispose of overburden generated by continued mineral extraction at an offsite location. However, due to the general lack of certainty or definition of an offsite disposal alternative, the County has determined that any analysis of potential environmental impacts

would be too speculative for evaluation. For this reason, an offsite overburden disposal alternative was eliminated from further consideration.

1.5.2 Alternatives Analyzed in this EIR

The following alternatives have been evaluated for their feasibility and ability to achieve the project objectives while avoiding, reducing, or minimizing the potentially significant and unavoidable impacts identified for the project. These alternatives (with the exception of the No Project Alternative) could meet some of the project objectives. The degree to which these alternatives substantially lower the significant impacts identified for the project is discussed in more detail in **Chapter 6** of this EIR, and summarized in **Table 1-5, Alternatives Impact Comparison Summary**.

Alternative A: No Project

Under the No-Project Alternative (Alternative A), the proposed reclamation plan would not be approved and expansion of vested mining to areas outside of the existing reclamation plan boundary would not proceed. Following completion of vested mining within the existing reclamation plan boundary, reclamation in accordance with the existing reclamation plan would be required. Under this alternative, none of the project objectives discussed above would be met.

Alternative B: Partial Backfilling of Pit B

Under the Partial Backfilling of Pit B Alternative (Alternative B) overburden material would be used to backfill a portion of Pit B to an elevation at or above the expected groundwater level. This alternative would ensure that any groundwater that collects in the bottom of Pit B, when reclaimed, would not be exposed to the open air, which in turn could prevent or reduce evaporation. This alternative would also result in certain overburden stockpiles being reduced in size or height, which could be a benefit from a visual perspective, although these improvements are expected to be nominal.

While this alternative would have potential benefits related to groundwater quantity compared to the proposed project, backfilling of Pit B would result in additional air pollutant and greenhouse gas (GHG) emissions as it would require additional mobile equipment operation to move the material from the nearby stockpiles back into Pit B as part of reclamation. Additional fuel energy would also be consumed by mobile equipment to facilitate backfilling. This increased material movement would also generate additional quantities of fugitive dust compared to the proposed project. Lastly, backfill could also generate additional noise effects due to additional mobile equipment operation in and around Pit B. Alternative B incorporates all mitigation measures recommended for the proposed project in **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures**.

Alternative C: Reduced Traffic Alternative associated with Increased Reclamation Timeframe

As indicated in the *Project Description* Section of this EIR, the demolition crew would demolish the stationary human-made items onsite required to be removed by the Reclamation

Plan (including the cement plant), then the salvage crew would sort the material comprising those items (as well as other human-made items onsite not requiring demolition, such as unused wire and pipe) into two categories (waste and recyclables) and transport the material to appropriately permitted facilities for disposal/recycling as applicable. As such, “salvage operations” are defined as the work of the salvage crew as indicated earlier in this paragraph.

Under the Reduced Traffic Alternative associated with Increased Reclamation Timeframe alternative (Alternative C), rather than a two-year reclamation timeframe, reclamation would be complete over a longer three-year timeframe. The primary potential advantage of this alternative is that the haul truck trips required to transport equipment to/from and material (including the demolished cement plant) from the site would be spread out over a longer period, which would be anticipated to result in fewer average trucks per day traveling on area roadways.

While this alternative would be anticipated to reduce haul truck traffic on a daily basis, it would not reduce the total number of truck trips required to remove the human-made items from the project site (including the demolished cement plant), which means total air and GHG emissions would remain unchanged compared to the project. Conversely, after the demolition crew demolishes the stationary human-made items onsite required to be removed by the proposed Reclamation Plan (including the cement plant), it may require more total truck trips by salvage crew personnel, as salvage crew personnel may not be able to remove material from the project site in as efficient a manner as possible to ensure daily truck trips are arbitrarily limited. Arbitrarily extending the reclamation timeframe also has the potential to create inefficiencies that could require the consumption of additional water or energy resources as compared to the proposed project.

Alternative C further incorporates all mitigation measures recommended for the proposed project in **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures**.

Alternatives Impact Comparison Summary

Table 1-5, Alternatives Impact Comparison Summary, compares the relative degree of potential environmental impacts of each of the alternatives with the proposed project.

Table 1-5 Alternatives Impact Comparison Summary

Resource Area	Alternative A (No Project)	Alternative B (Partial Backfilling of Pit B)	Alternative C (Reduced Traffic Alternative associated with Increased Reclamation Timeframe)
Aesthetics	-	-	=
Agricultural and Forestry Resources	=	=	=
Air Quality	-	+	=
Biological Resources	-	+	=

Table 1-5 Alternatives Impact Comparison Summary

Resource Area	Alternative A (No Project)	Alternative B (Partial Backfilling of Pit B)	Alternative C (Reduced Traffic Alternative associated with Increased Reclamation Timeframe)
Cultural Resources	-	=	=
Energy	-	+	=
Geology and Soils	-	=	=
Greenhouse Gas Emissions	-	+	=
Hazards and Hazardous Materials	-	=	=
Hydrology and Water Quality	-	-	=
Land Use and Planning	-	=	=
Mineral Resources	-	=	=
Noise	-	+	=
Public Services	-	=	=
Transportation	-	=	-
Tribal Cultural Resources	-	=	=
Utilities and Service Systems	-	=	=
Wildfire	-	=	=

Notes:

"-" = impact is less than proposed project

"+" = impact is greater than proposed project

"=" = impact is same as the proposed project

1.5.3 Environmentally Superior Alternative

An EIR must identify the environmentally superior alternative to the proposed project. Alternative A, the No-Project Alternative, is environmentally superior to the proposed project and would not result in the physical environmental impacts identified for the proposed project. However, the No-Project Alternative would not meet any of the objectives of the proposed project. Under State CEQA *Guidelines* Section 15126.6(e)(2), if the environmentally superior alternative is the No-Project Alternative, then an environmentally superior alternative must be identified among the other alternatives.

As described above, Alternative B (Partial Backfilling of Pit B) would reduce environmental impacts related to long-term groundwater loss through evaporation and could also result in marginal benefits associated with aesthetics, hydrology and water quality. However, Alternative B would also be expected to result in marginally increased impacts associated with

air quality, biological resources, energy, greenhouse gas emissions, and noise compared to the proposed project.

Alternative B would be a feasible alternative that meets all of the project objectives while reducing potential impacts of the proposed project associated with long-term groundwater loss through evaporation. Alternative B, Partial Backfilling of Pit B, is therefore considered to be the environmentally superior alternative for the purposes of this analysis.

1.6 Areas of Controversy

Written agency and public comments received during the public review period for the NOP are included in **Appendix A**. Although not controversial, key issues were identified during scoping as necessitating further description or evaluation. Those issues are discussed as they relate to the various environmental topics in **Chapter 4** of this EIR.

1.7 Issues to Be Resolved

State CEQA *Guidelines* Section 15123(b)(3) requires that an EIR include issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects. The following issues are to be resolved:

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

1.8 Summary of Environmental Impacts and Mitigation Measures

State CEQA *Guidelines* Section 15123 requires that an EIR contain a brief summary of the proposed actions and its consequences. **Table 1-6, Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation**, is a summary of the environmental impacts of the project, mitigation measures, and the impact significance both before and after mitigation. Each is analyzed in **Chapter 4** of this EIR.

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
4.1 Aesthetics			
Impact 4.1-1: The project would have a substantial adverse effect on a scenic vista.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.1-2: The project would substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a scenic highway.	Less than Significant	Mitigation is not required.	Less than significant
Impact 4.1-3: The project would substantially degrade the existing visual character or quality of public views of the site and its surroundings.	Significant	<p>MM 4.1-1: At least 30 days prior to the commencement of reclamation activities, the project proponent/operator shall submit a Maintenance and Trash Abatement/Pest Management Program to the Kern County Planning and Natural Resources Department. The program shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> a. The project proponent/operator shall clear debris from the project area at least twice per year. b. Trash and food items shall be contained in closed containers and removed at least once per week to reduce the attractiveness to opportunistic predators, such as common ravens, coyotes, and feral dogs. c. The project proponent/operator shall erect signs with contact information for the project proponent/operator's maintenance staff at regular intervals along the site boundary, as required by the Kern County Planning and Natural Resources Department. Maintenance staff shall respond within 2 weeks to resident requests for additional cleanup of debris. Correspondence with such requests and responses shall be submitted to the Kern County Planning and Natural Resources Department. 	Less than significant
Impact 4.1-4: The project would create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.	Potentially significant	MM 4.1-2: Project facility lighting shall continuously comply with the applicable provisions of the Dark Skies Ordinance (Kern County Zoning Ordinance Chapter 19.81) and shall be designed to provide the minimum illumination needed to achieve safety and security objectives. All lighting shall be directed downward and shielded to	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>focus illumination on the desired areas only and avoid light trespass into adjacent areas.</p> <p>MM 4.1-3: Prior to commencement of reclamation activities as authorized by this approval, the project proponent/operator shall submit an Outdoor Lighting Plan to the Kern County Planning and Natural Resources Department in accordance with Kern County Zoning Ordinance Chapter 19.81 (Outdoor Lighting “Dark Skies Ordinance”). Due to the fact that reclamation may occur in different locations throughout the site over the life of the project, the approved Outdoor Lighting Plan is subject to change during project operations to ensure overall impacts to adjacent parcels are reduced to the extent feasible.</p> <p>The project proponent/operator shall establish a Lighting Complaint Coordinator for the proposed project. The Lighting Complaint Coordinator shall be responsible for responding to any complaints about light or glare from the project. The Lighting Complaint Coordinator shall determine the cause of the complaint and shall be required to implement reasonable measures to resolve the complaint. Lighting complaints and responses shall be submitted to the Kern County Planning and Natural Resources Department. Contact information for the Lighting Complaint Coordinator shall be submitted to the Kern County Planning and Natural Resources Department prior to commencement of operations as authorized by this approval.</p> <p>A sign, legible at a distance of 50 feet, shall be posted at the intersection of the project’s Primary Access Road with Oak Creek Road. The sign shall state a Reclamation Plan has been approved for the site and include a telephone number where complaints can be registered with the Complaint Coordinator. Documentation that the sign has been posted shall be provided to the Kern County Planning and Natural Resources Department.</p>	

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Impact 4.1-5: The project would contribute to cumulative aesthetic and visual resource impacts.	Significant	Implement Mitigation Measures MM 4.1-1 through MM 4.1-3 .	Less than significant
4.2 Agricultural and Forestry Resources			
Impact 4.2-1: The project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.	No Impact	Mitigation is not required.	No Impact
Impact 4.2-2: The project would conflict with existing zoning for agricultural use, or Williamson Act contract.	Less than Significant	Mitigation is not required.	Less than Significant
Impact 4.2-3: The project would conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).	Less than Significant	Mitigation is not required.	Less than Significant
Impact 4.2-4: The project would result in the loss of forest land or conversion of forest land to non-forest use.	Less than Significant	Mitigation is not required.	Less than Significant
Impact 4.2-5: The project would involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.	Less than Significant	Mitigation is not required.	Less than Significant
Impact 4.2-6: The project would result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Section 15206(b)(3) Public Resources Code.	No Impact	Mitigation is not required.	No Impact

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Impact 4.2-7: The project would contribute to cumulative agriculture and forest resource impacts	Less than Significant	Mitigation is not required.	Less than Significant
4.3 Air Quality			
Impact 4.3-1: The project would conflict with or obstruct implementation of applicable air quality plans.	Potentially significant	<p>MM 4.3-1: The project shall comply with any applicable requirement of the Eastern Kern Air Pollution Control District (EKAPCD).</p> <p>MM 4.3-2: To control NOx and PM emissions from the on-site equipment, the project proponent/operator and/or its contractor(s) shall continuously implement the following measures:</p> <ul style="list-style-type: none"> a. Comply with the In-Use Off-road Diesel-Fueled Fleets Regulation. b. All equipment shall be maintained in accordance with the manufacturer's specifications. c. Heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 5 minutes. This mitigation measure does not apply to equipment that is subject to the CARB Off Road Diesel Vehicle regulations and the idling is when queuing; to verify that the vehicle is in safe operating condition; for testing, servicing, repairing or diagnostic purposes; necessary to accomplish work for which the vehicle was designed for; idling required to bring the machine system to operating temperature; or necessary to ensure safe operation of the vehicle. d. Notification shall be provided to trucks and vehicles in loading or unloading queues that engines shall be turned off when not in use for more than 5 minutes. e. Electric equipment shall be used to the extent feasible in lieu of diesel or gasoline-powered equipment. f. All heavy-duty equipment shall be in compliance with CARB Off-Road Diesel Regulations. 	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>g. On-road and off-road diesel equipment shall use diesel particulate filters (or the equivalent), if permitted under the manufacturer's guidelines.</p> <p>h. Existing electric power sources shall be used to the extent feasible. This measure would minimize the use of higher polluting gas or diesel generators.</p> <p>MM 4.3-3: At least 30 days prior to commencement of reclamation activities, the project proponent shall amend/maintain a comprehensive Fugitive Dust Control Plan, which shall include:</p> <p>a. All soil being actively excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soils areas. Watering shall take place a minimum of three times daily where soil is being actively disturbed, unless dust is otherwise controlled by rainfall or use of a dust suppressant.</p> <p>b. Vehicle speed for all on site (i.e., within the project boundary) vehicles shall be managed effectively to reduce fugitive dust. Signs identifying vehicle speed limits shall be posted along onsite roadways, at the site entrance/exit, and along unpaved site access roads.</p> <p>c. All onsite unpaved roads and offsite unpaved project-site access road(s) shall be effectively stabilized of dust emissions using water or EKAPCD-approved dust suppressants/palliatives, sufficient to prevent wind-blown dust exceeding 20 percent opacity at nearby residences or public roads. If water is used, watering shall occur sufficient to keep soil moist along actively used roadways. During the dry season, unpaved road surfaces and vehicle parking/staging areas shall be watered immediately prior to periods of high use (e.g., worker commute periods, truck convoys).</p> <p>d. The amount of the disturbed area (e.g., grading, excavation) shall be reduced and/or phased where possible.</p>	

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<ul style="list-style-type: none"> e. All disturbed areas shall be sufficiently watered or stabilized by EKAPCD-approved methods to prevent excessive dust. Watering frequency shall be increased whenever wind speeds exceed 15 mph or, as necessary, to prevent wind-blown dust exceeding 20 percent opacity at nearby residences or public roads. f. All grading, earth moving, and excavation activities shall cease during periods when dust plumes of 20 percent or greater opacity affect public roads or nearby occupied structures. g. All disturbed areas anticipated to be inactive for periods of 30 days or more shall be managed effectively to minimize wind-blown dust emissions. h. Where applicable, permanent dust control measures shall be implemented as soon as possible following the completion of any soil-disturbing activities. i. Stockpiles of dirt or other fine loose material shall be stabilized by watering or other appropriate methods sufficient to reduce visible dust emissions to a limit of 20 percent opacity. If necessary and where feasible, three-sided barriers shall be constructed around storage piles and/or piles shall be covered by use of tarps, hydro-mulch, woodchips, or other materials sufficient to minimize wind-blown dust. j. Water shall be applied prior to and during the demolition of onsite structures, as necessary, sufficient to minimize wind-blown dust. k. All on-road trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least six inches of freeboard (minimum vertical distance between top of the load and top of the trailer) in accordance with California Vehicle Code Section 23114. l. Gravel pads, grizzly strips, or other material track-out control methods approved for use by EKAPCD shall be installed where 	

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>vehicles enter onto paved public roadways from unpaved roadways.</p> <p>m. On-road and off-road vehicles and equipment leaving the site shall be washed with water or high-pressure air, and/or rocks/grates at the project entry points shall be used, when necessary, to remove soil deposits and minimize the track-out/deposition of soil from unpaved roadways onto nearby paved public roadways.</p> <p>n. Portable equipment, 50 horsepower or greater, used during reclamation activities (e.g., portable generators) shall require California statewide portable equipment registration (issued by CARB) or an EKAPCD permit.</p> <p>o. The Fugitive Dust Control Plan shall identify a Fugitive Dust Complaint Coordinator for the proposed project. The Fugitive Dust Complaint Coordinator shall be responsible for responding to any complaints about dust from the project or haul trucks. The Fugitive Dust Complaint Coordinator shall determine the cause of the complaint and shall be required to implement reasonable measures to resolve the complaint. Contact information for the Fugitive Dust Complaint Coordinator shall be submitted to the Kern County Planning and Natural Resources Department prior to commencement of reclamation activities as authorized by this approval.</p> <p>p. A sign, legible at a distance of 50 feet, shall be posted at the intersection of the project's Primary Access Road with Oak Creek Road prior to the commencement of reclamation activities. The sign shall state a Reclamation Plan has been approved for the site and include a telephone number where complaints can be registered with the Complaint Coordinator. Documentation that the sign has been posted shall be provided to the Kern County Planning and Natural Resources Department</p>	

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		q. The designated Fugitive Dust Complaint Coordinator shall document any air quality complaints received. If necessary, the project operator and/or contractor will coordinate with EKAPCD to identify any additional feasible measures and/or strategies to be implemented to address public complaints.	
Impact 4.3-2: The project would result in a cumulatively considerable net increase of a criteria pollutant for which the project region is nonattainment under an applicable Federal or State ambient air quality standard.	Potentially significant	Implement Mitigation Measures MM 4.3-1 through MM 4.3-3 . MM 4.3-4: Surface disturbance shall be kept to a minimum in advance of mining. At such time as surface mining or associated activities have been completed on an area of disturbed land, reclamation efforts shall be initiated on those portions of the disturbed lands that will not be subject to further disturbance by the surface mining operation or its associated activities.	Less than significant
Impact 4.3-3: The project would expose sensitive receptors to substantial pollutant concentrations.	Less than significant	Implement Mitigation Measures MM 4.3-1 through MM 4.3-4 . MM 4.3-5: At least 30 days prior to commencement of reclamation activities, to minimize personnel and public exposure to potential Valley Fever–containing dust on and off site, the following control measures shall be implemented: a. Equipment, vehicles, and other items shall be thoroughly cleaned of dust before they are moved offsite to other work locations. b. Wherever possible, grading shall be phased so that earth-moving equipment is working well ahead or downwind of workers on the ground. c. The area immediately behind grading equipment shall be sprayed with water before ground workers move into the area. d. In the event that a water truck runs out of water before dust is sufficiently dampened, ground workers exposed to dust shall leave the area until a truck can resume water spraying.	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<ul style="list-style-type: none"> e. To the greatest extent feasible, heavy-duty earth-moving vehicles shall be closed-cab and equipped with a HEPA-filtered air system. f. Workers shall receive training in procedures to minimize activities that may result in the release of airborne <i>Coccidioides immitis</i> (CI) spores and recognize the symptoms of Valley Fever and shall be instructed to promptly report suspected symptoms of work-related Valley Fever to a supervisor. Evidence of training shall be provided to the Kern County Planning and Natural Resources Department within 5 days of the training session. g. A Valley Fever informational handout shall be provided to all onsite personnel and surrounding residences within 1000 feet of the project site. The handout shall, at a minimum, provide information regarding symptoms, health effects, preventative measures, and treatment of Valley Fever. At least 30 days prior to commencement of reclamation activities, this handout shall be mailed to all existing residences within 1000 feet of the project boundaries. Additional information and handouts can be obtained by contacting the Kern County Public Health Services Department. h. Onsite personnel shall be trained on the proper use of personal protective equipment, including respiratory equipment. National Institute for Occupational Safety and Health-approved respirators shall be provided to onsite personnel, upon request. When exposure to dust is unavoidable, affected workers shall be provided appropriate NIOSH-approved respiratory protection. If respiratory protection is deemed necessary, employers must develop and implement a respiratory protection program in accordance with the California Occupational Safety and Health Administration's Respiratory Protection standard (8 CCR 5144). 	

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>MM 4.3-6: At least 30 days prior to commencement of reclamation activities, a COVID-19 Health and Safety Plan shall be prepared in accordance with the Kern County Public Health Services Department and Kern County Health Officer mandates. A copy of the COVID-19 Health and Safety Plan shall be submitted to the Kern County Planning and Natural Resources Department to be kept on file.</p> <p>MM 4.3-7: Within 30 days of the effective date of approval, a one-time fee shall be paid to the Kern County Public Health Services Department in the amount of \$3,200 for public awareness programs.</p>	
Impact 4.3-4: The project would result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.3-5: The project would contribute to cumulative air quality impacts.	Less than significant	Implement Mitigation Measures MM 4.3-1 through MM 4.3-7 .	Less than significant
4.4 Biological Resources			
Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Potentially Significant	MM 4.4-1: Within 30 days of the effective date of this approval, the project proponent/operator shall develop an employee awareness program on the Migratory Bird Treaty Act and the Federal and State endangered species laws and regulations. The program shall provide employees with sufficient information to identify sensitive or protected species that could exist on-site, methods to avoid these species, and protection measures to reduce the potential for incidental take of these species. The employee awareness program shall be approved and implemented by a qualified biologist until such time as reclamation has been completed and the site deemed fully reclaimed by the Kern County Planning and Natural Resources Department. A copy of the approved training	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>materials shall be provided to the Kern County Planning and Natural Resources Department.</p> <p>MM 4.4-2: Prior to initial ground disturbance during ongoing mining operations and reclamation activities within undisturbed portions of the project site, a qualified biologist knowledgeable in the identification of all special-status wildlife and rare plant species shall conduct a pre-construction clearance survey of areas proposed for disturbance within the project site to record existing conditions of the site, determine if conditions have changed since the most recent reconnaissance or botanical surveys were conducted, and to determine where sensitive species avoidance buffers will be established for special-status species considered to have the potential to occur within the project site, including but not limited to the following:</p> <p>Special-Status Wildlife Species</p> <ul style="list-style-type: none"> • Northern California legless lizard (<i>Anniella pulchra</i>) • Golden eagle (<i>Aquila chrysaetos</i>) • burrowing owl (<i>Athene cunicularia</i>) • ferruginous hawk (<i>Buteo regalis</i>) • Swainson's hawk (<i>Buteo swainsonii</i>) • merlin (<i>Falco columbarius</i>) • desert tortoise (<i>Gopherus agassizii</i>) • loggerhead shrike (<i>Lanius ludovicianus</i>) • Tulare grasshopper mouse (<i>Onychomys torridus tularensis</i>) • Tehachapi pocket mouse (<i>Perognathus alticola inexpectatus</i>) • San Joaquin pocket mouse (<i>Perognathus inornatus</i>) • Coast horned lizard (<i>Phrynosoma blainvillii</i>) • American badger (<i>Taxidea taxus</i>) 	

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<ul style="list-style-type: none"> • Le Conte's thrasher (<i>Toxostoma lecontei</i>) • Mohave ground squirrel (<i>Xerospermophilus mohavensis</i>) • California condor (<i>Gymnogyps californianus</i>) • Willow flycatcher (<i>Empidonax traillii</i>) • southern rubber boa (<i>Charina umbratica</i>) • Tehachapi slender salamander (<i>Batrachoseps stebbinsi</i>) • Crotch's bumble bee (<i>Bombus crotchii</i>) • Bakersfield cactus (<i>Opuntia basilaris</i> var. <i>treleasei</i>) • desert kit fox (<i>Vulpes macrotis arsipus</i>) • western red bat (<i>Lasiurus frantzii</i>) • California spotted owl (<i>Strix occidentalis occidentalis</i>) • long-eared owl (<i>Asio otus</i>) • Mountain plover (<i>Charadrius montanus</i>) • Northern harrier (<i>Circus hudsonius</i>) • Vaux's swift (<i>Chaetura vauxi</i>) • yellow-headed blackbird (<i>Xanthocephalus xanthocephalus</i>) • yellow warbler (<i>Setophaga petechia</i>) • black-tailed gnatcatcher (<i>Polioptila melanura</i>) • Cooper's hawk (<i>Accipiter cooperii</i>) • Long-billed curlew (<i>Numenius americanus</i>) • prairie falcon (<i>Falco mexicanus</i>) • sharp-shinned hawk (<i>Accipiter striatus</i>) • White-faced ibis (<i>Plegadis chihi</i>) • yellow-blotched salamander (<i>Ensatina eschscholtzii croceata</i>) <p>Special-Status Plant Species</p> <ul style="list-style-type: none"> • Horn's milk-vetch (<i>Astragalus hornii</i> var. <i>hornii</i>) • alkali mariposa-lily (<i>Calochortus striatus</i>) 	

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<ul style="list-style-type: none"> Pale-yellow layia (<i>Layia heterotricha</i>) Tehachapi monardella (<i>Monardella linoides</i> ssp. <i>oblonga</i>) Latimer's woodland-gilia (<i>Saltugilia latimeri</i>) Western Joshua tree (<i>Yucca brevifolia</i>) Coulter's goldfields (<i>Lasthenia glabrata</i> ssp. <i>Coulteri</i>) Baja navarretia (<i>Navarretia peninsularis</i>) Calico monkeyflower (<i>Diplacus pictus</i>) Palmer's mariposa-lily (<i>Calochortus palmeri</i> var. <i>palmeri</i>) Robbins' nemacladus (<i>Nemacladus secundiflorus</i> var. <i>robbinsii</i>) grey-leaved violet (<i>Viola pinetorum</i> ssp. <i>grisea</i>) Mt. Pinos onion (<i>Allium howellii</i> var. <i>clokeyi</i>) southern Sierra monardella (<i>Monardella linoides</i> ssp. <i>anemonoides</i>) <p>If initial ground-disturbing activities do not commence within 30 days of the initial survey date, surveys shall be repeated to refresh results.</p> <p>If any sensitive species are observed, buffers shall be established by the qualified biologist as necessary to prevent incidental take of any observed sensitive species.</p> <p>MM 4.4-3: During vested mining and reclamation activities, the project proponent/operator shall implement the following general avoidance and protective measures:</p> <ol style="list-style-type: none"> All reclamation activities shall be confined within the project area, which may include temporary access roads, haul roads, and staging areas specifically designated and marked for these purposes. At no time shall equipment or personnel be allowed to adversely affect areas outside the project site. All stockpiles shall be in disturbed areas that lack native vegetation to the maximum extent practicable. 	

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<ul style="list-style-type: none"> c. All trash and food items including microtrash (e.g., wrappers, bottle tops, food scraps) should be properly stored in a closed container. d. Workers shall be prohibited from bringing pets and personal firearms to the project site and from feeding wildlife. e. Vehicle traffic shall use established roadways. Off-road vehicle travel should be minimized to the maximum extent practicable. f. No construction vehicle or equipment parked on the project site shall be moved prior to inspecting the ground beneath the vehicle or equipment for the presence of listed wildlife species. If present, the animal shall be left to move on its own. g. Open excavations or trenches more than two (2) feet deep shall be covered at the end of each workday to prevent wildlife entrapment. If an excavation or trench is too large to cover, one or more escape ramps shall be installed, no less than 12 inches wide and secured at the top. Covered and non-covered excavations and trenches shall be inspected for wildlife prior to the commencement of work. h. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at the site for more than 24 hours and without endcaps shall be thoroughly inspected prior to being moved or capped. If a listed wildlife species is discovered inside a pipe, that section of pipe shall not be moved or capped until a qualified biologist has been consulted and the animal has either moved from the structure on its own accord or until the animal has been captured and relocated in conformance with appropriate wildlife agency guidelines. i. If perimeter fencing is used, then the fencing shall include a 4- to 8-inch (0.1- to 0.2-meter) opening between the fence mesh and the ground or the fence shall be raised 4 inches above the 	

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>ground or as otherwise established by a qualified wildlife biologist to enable wildlife to pass through the project site.</p> <p>j. All vertical tubes and chain-link fencing piles shall be temporarily or permanently capped to avoid the entrapment and death of special-status wildlife and birds.</p> <p>k. Any dead or injured special-status wildlife found on the project site shall be left in place and reported to the U.S. Fish and Wildlife Service/California Department of Fish and Wildlife within 48 hours of the discovery for rescue or salvage. Discovery of Federally or State-listed species that are injured or dead shall also be managed consistent with regulatory requirements, including being reported immediately via telephone and within 24 hours in writing, and a copy shall be furnished to the Kern County Planning and Natural Resources Department.</p> <p>l. All washing of trucks, or other mobile equipment shall occur in areas where runoff is effectively managed to avoid discharge of contaminants. Wash water may not be discharged from the site and shall be located at least 100 feet (30.48 meters) from any water body or sensitive biological resources. If ground disturbance is intended to be temporary and does not occur on cultivated land, topsoil segregation shall be performed for restoration efforts. Segregated topsoil shall be stored separate from the subsoil and segregated topsoil shall be restored following resource recovery activities. This will decrease unwanted invasive plant species (e.g., tumble weed, invasive grasses) from invading the area.</p> <p>m. Contact a qualified biologist if any dens suitable for desert tortoise, burrowing owl, and/or American badger (4 inches or greater in diameter) are observed during project activities.</p> <p>n. If any threatened, endangered, or otherwise sensitive species are uncovered during project activities, work shall be halted,</p>	

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>their locations shall be mapped and the project proponent shall confer with CDFW or USFWS as required by applicable by law to determine the best course of action. Any threatened, endangered, or otherwise sensitive wildlife species shall be allowed to leave the site of their own accord.</p> <p>MM 4.4-4: Active pits with slopes steeper than 2:1 (horizontal:vertical) shall have a minimum of one escape ramp or shall otherwise be fenced or obstructed to prevent wildlife entrapment.</p> <p>MM 4.4-5: No more than 10 days prior to initial ground-disturbing activities, a pre-disturbance survey for active bird nests shall be conducted, if work occurs during the typical nesting bird season (February 1 through August 31). If any active nests are observed, appropriate buffer areas (at least 50 feet) shall be established around each nest for avoidance as appropriate.</p> <p>MM 4.4-6: No more than 30 days prior to initial ground-disturbing activities, if planned to occur during the nesting seasons for raptors and migratory birds (typically February 1 through August 31), the project proponent shall retain a qualified biologist to conduct a focused survey for active nests of raptors and migratory birds within and in the vicinity of the project site (no less than 500 feet outside project boundaries, where possible).</p> <p>MM 4.4-7: If active nests are located during pre-disturbance surveys, U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife shall be notified regarding the status of the nests. If an active golden eagle nest is located within 500 feet of ground-disturbing activities, or if any other active raptor nest is located within 100 feet of ground-disturbing activities, or if an active migratory bird nest is located within 50 feet of ground-disturbing activities protection measures shall be applied and enforced. Protection measures would include delaying project activities until the end of the breeding season, or if, project activities must take place during the breeding season, establishing an</p>	

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>appropriate avoidance area (buffer zone) around the nest as determined by a qualified biologist in consultation with the appropriate resource agency. A qualified wildlife biologist shall monitor the nest to determine when the young have fledged and submit monthly reports to the Kern County Planning and Natural Resources Department throughout the nesting season. The biological monitor shall have the authority to cease mining activities or other activities if sign of distress to the raptor or migratory bird occurs.</p> <p>MM 4.4-8: During vested mining and reclamation activities, initial ground disturbance within undisturbed portions of the project site shall be restricted as necessary to avoid disturbance of a nest until it is abandoned or a qualified biologist deems disturbance potential to be minimal (in consultation with U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife). Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment) or alteration of the schedule for project activities. No action is necessary if initial ground disturbance within undisturbed portions of the project site occurs during the raptor and migratory bird nonbreeding season (September 1 through January 31).</p> <p>MM 4.4-9: If nighttime lighting for reclamation activities is required and is within 50 feet of the outside edge of areas containing habitat for special-status wildlife, as determined by the qualified biologist, lighting shall be directed away from those areas that contain habitat for special-status wildlife.</p>	
<p>Impact 4.4-2: The project would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.</p>	Potentially significant	<p>MM 4.4-10: Prior to removal of any western Joshua tree individuals, the project proponent/operator shall obtain a Western Joshua Tree Conservation Act Incidental Take Permit if required for those that cannot be avoided or preserved on the project site, and shall comply with all avoidance, minimization, and compensatory mitigation requirements set forth in any incidental take permit</p>	Significant and Unavoidable

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>issued for the project. All trees removed may be salvaged to the extent feasible and as allowed by issued permits.</p> <p>MM 4.4-11: If Regional Water Quality Control Board (RWQCB) and/or CDFW jurisdictional resources cannot be avoided, the project proponent/operator shall be subject to provisions as identified below:</p> <ul style="list-style-type: none"> a. Prior to ground disturbance activities that could impact RWQCB and/or CDFW jurisdictional resources, the project proponent/operator shall consult with the RWQCB and/or CDFW to obtain all necessary permits. Permits shall be obtained prior to disturbance of jurisdictional resources. b. The project proponent/operator shall comply with all avoidance, minimization, and compensatory mitigation measures, as set forth in permits issued to the project by RWQCB and/or CDFW. c. Copies of permits/approvals obtained from the RWQCB and/or CDFW shall be provided to the Kern County Planning and Natural Resources Department. 	
Impact 4.4-3: The project would have a substantial adverse effect on Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Less than Significant	Mitigation is not required.	Less than Significant
Impact 4.4-4: The project would 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.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.4-5: The project would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Less than significant	Mitigation is not required.	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Impact 4.4-6: The project would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	Less than significant	Mitigation is not required.	Less than significant
Impact 4.4-7: The project would contribute to cumulative biological resource impacts.	Potentially Significant	Implement Mitigation Measures MM 4.4-1 through MM 4.4-11 .	Less than significant
4.5 Cultural Resources			
Impact 4.5-1: The proposed project would cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines Section 15064.5.	Potentially Significant	<p>MM 4.5-1: At least 30 days prior to commencement of reclamation activities, the project applicant shall retain a qualified Lead Archaeologist to carry out all mitigation measures related to archaeological and historical resources.</p> <p>The contact information for this Lead Archaeologist shall be provided to the Kern County Planning and Natural Resources Department. Further, the Lead Archaeologist shall be responsible for ensuring the following employee training provisions are implemented during implementation of the project:</p> <ul style="list-style-type: none"> a. The Lead Archaeologist shall prepare Cultural Resources Sensitivity Training materials, including a Cultural Resources Sensitivity Training Guide, to be used in an orientation program given to all personnel working on the project. The training guide may be presented in video form. A copy of the proposed training materials, including the Cultural Resources Sensitivity Training Guide, shall be provided to the Planning and Natural Resources Department. b. The project proponent/operator shall ensure all new employees or onsite workers who have not participated in earlier Cultural Resources Sensitivity Trainings shall meet provisions specified above. c. The training shall include an overview of potential cultural resources that could be encountered during ground-disturbing 	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>activities to facilitate worker recognition, avoidance, and subsequent immediate notification to the Lead Archaeologist for further evaluation and action, as appropriate; and penalties for unauthorized artifact collecting or intentional disturbance of archaeological resources.</p> <p>d. A copy of the Cultural Resources Sensitivity Training Guide/Materials shall be kept on-site and available for all personnel to review and be familiar with as necessary. It is the responsibility of the Lead Archaeologist to ensure all employees receive appropriate training before commencing work on-site.</p> <p>MM 4.5-2: In the event archaeological or historical resources are encountered during ground-disturbing activities, the proposed project proponent/operator shall cease any ground-disturbing activities within 100 feet of the find and notify the Kern County Planning and Natural Resources Department. The Lead Archaeologist shall evaluate the significance of the resource(s) and recommend appropriate treatment measures. Per State CEQA Guidelines Section 15126.4(b)(3), proposed project redesign and preservation in place shall be the preferred means to avoid impacts to significant archaeological or historical resources. Consistent with State CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the Lead Archaeologist shall develop additional treatment measures in consultation with Kern County, which may include data recovery or other appropriate measures. Kern County shall consult with the project proponent and appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature; this consultation may also be conducted in advance of earth-disturbing work through a memorandum of agreement and/or an Unanticipated Discoveries Treatment Plan. Archaeological materials recovered during any investigation shall</p>	

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		be presented for curation at an accredited curation facility. The Lead Archaeologist shall prepare a report documenting evaluation and/or additional treatment of the resource. A copy of the report shall be provided to the Kern County Planning and Natural Resources Department and to the Southern San Joaquin Valley Information Center.	
Impact 4.5-2: The project would cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5.	Potentially Significant	Implement Mitigation Measures MM 4.5-1 through MM 4.5-2 .	Less than significant
Impact 4.5-3: The proposed project would disturb human remains, including those interred outside of dedicated cemeteries.	Potentially Significant	MM 4.5-3: If human remains are uncovered during ongoing vested mining operations or reclamation activities, the project proponent/operator shall immediately halt work within 100 feet of the find, contact the Kern County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5(e) of the State CEQA Guidelines. At that time, the project proponent/operator shall contact the Kern County Planning and Natural Resources Department regarding the find. If the Kern County Coroner determines that the remains are Native American, the coroner shall contact the Native American Heritage Commission, in accordance with California Health and Safety Code Section 7050.5(c), and Public Resources Code 5097.98 (as amended by Assembly Bill 2641). The Native American Heritage Commission shall designate a Most Likely Descendent for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, and in accordance with generally accepted cultural or archeological standards or practices, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendent regarding their recommendations, if applicable, taking	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		into account the possibility of multiple human remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (Section 7100 et seq.) directing identification of the next-of-kin will apply.	
Impact 4.5-4: The project would contribute to cumulative cultural resources impacts.	Potentially Significant	Implement Mitigation Measures MM 4.5-1 through MM 4.5-3 .	Less than significant
4.6 Energy			
Impact 4.6-1: The project would result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.6-2: The project would conflict with or obstruct a State or local plan for renewable energy or energy efficiency.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.6-3: The project would contribute to cumulative energy impacts.	Less than significant	Mitigation is not required.	Less than significant
4.7 Geology and Soils			
Impact 4.7-1: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo earthquake fault zoning map issued by the State geologist for the area or based on other substantial evidence of a known fault.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.7-2: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving strong seismic ground shaking.	Potentially Significant	MM 4.7-1: In accordance with the approved reclamation plan, maximum slopes and depths for the project shall be as follows: a. Maximum final reclaimed slopes for mine pits A, B, C and D shall be as provided in the approved reclamation plan. Mine	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>pits E and F shall be backfilled as shown on the approved reclamation plan.</p> <p>b. Maximum overall final reclaimed slopes for the twelve permanent material stockpiles (SP 1, SP 2A, SP 2B, SP 3, SP 4, SP 5, SP 6, SP 7, SP 8, SP 9A, SP 9B, SP 10) shall be 1.75:1 (horizontal:vertical (h:v)).</p> <p>c. Maximum depth of excavation of the quarry shall be the maximum excavation depths identified in the approved reclamation plan.</p> <p>d. Maximum height of the twelve permanent stockpiles shall be the maximum stockpile heights identified in the approved reclamation plan.</p> <p>Increased slopes and/or depths may be approved in accordance with the provisions of the Surface Mining and Reclamation Act (SMARA) of 1975 and Section 19.100 of the Kern County Zoning Ordinance.</p>	
Impact 4.7-3: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving seismic-related ground failure, including liquefaction.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.7-4: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving landslides.	Potentially Significant	Implement Mitigation Measure MM 4.7-1 .	Less than significant
Impact 4.7-5: The project would result in substantial soil erosion or the loss of topsoil.	Potentially Significant	Implement Mitigation Measures MM 4.7-1 and MM 4.10-1 (see Section 4.10, <i>Hydrology and Water Quality</i>).	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Impact 4.7-6: The project would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Potentially Significant	Implement Mitigation Measures MM 4.7-1 .	Less than significant
Impact 4.7-7: The project would be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (1994), creating substantial risks to life or property.	Less than Significant	Mitigation is not required.	Less than significant
Impact 4.7-8: The project would have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	No Impact	Mitigation is not required.	No Impact
Impact 4.7-9: The project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially Significant	<p>MM 4.7-2: At least 30 days prior to commencement of reclamation activities, the project proponent shall retain a qualified Paleontologist, defined as a Paleontologist meeting the Society for Vertebrate Paleontology's Professional Standards (Society for Vertebrate Paleontology 2010). The qualified Paleontologist and the Lead Archaeologist may be the same individual.</p> <p>MM 4.7-3: If a paleontological resource is found, the project proponent/operator shall cease ground-disturbing activities within 50 feet of the find. The qualified paleontologist shall evaluate the significance of the resource(s) and recommend appropriate treatment measures. At each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples shall be collected and submitted for analysis. Any fossils encountered and recovered shall be catalogued and presented for donation to a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository.</p>	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Impact 4.7-10: The project would contribute to cumulative geology and soil resource impacts.	Less than significant	Implement Mitigation Measures MM 4.7-1 through MM 4.7-3 , and MM 4.10-1 (see Section 4.10, <i>Hydrology and Water Quality</i>).	Less than significant
4.8 Greenhouse Gas Emissions			
Impact 4.8-1: The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.8-2: The project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.8-3: The project would contribute to cumulative greenhouse gas emissions impacts.	Less than significant	Mitigation is not required.	Less than significant
4.9 Hazards and Hazardous Materials			
Impact 4.9-1: The project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Potentially Significant	<p>MM 4.9-1: At least 30 days prior to commencement of reclamation activities, the project proponent/operator shall prepare and submit an Emergency Response Plan to the Kern County Fire Department for review and approval, or maintain an Emergency Response Plan approved by the Kern County Fire Department. A copy of the approved Emergency Response Plan shall be submitted to the Kern County Planning and Natural Resources Department to be kept on file.</p> <p>MM 4.9-2: During the life of the project, including reclamation, the project operator shall maintain and amend as necessary, a Hazardous Materials Business Plan (HMBP), and submit all required information to the California Environmental Reporting System (CERS) at http://cers.calepa.ca.gov/. A copy of the HMBP and CERS registration shall be provided to the Kern County Planning and Natural Resources Department.</p>	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Impact 4.9-2: The project would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Potentially Significant	Implement Mitigation Measures MM 4.9-1 and MM 4.9-2 and the following additional mitigation measures. MM 4.9-3: The project proponent/operator shall ensure that in the event any abandoned or unrecorded wells are uncovered or damaged during excavation or grading activities, all work shall cease in the vicinity of the well, and the California Department of Conservation Division of Geologic Energy Management Division (CalGEM) shall be contacted for requirements and approval. The CalGEM may determine that remedial plugging operations may be required and shall be contacted and brought to the project site to make a proper assessment of the suspect materials. MM 4.9-4: Prior to commencement of reclamation activities, the project proponent/operator shall install signage, per Kern County signage requirements, warning of mine reclamation operations. Signage design, message and location(s) shall be subject to review by the Kern County Planning and Natural Resources Department prior to installation.	Less than significant
Impact 4.9-3: The project would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 1/4 mile of an existing or proposed school?	Less than Significant	Mitigation is not required.	Less than Significant
Impact 4.9-4: The project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment.	Less than Significant	Mitigation is not required.	Less than Significant
Impact 4.9-5: The project would be located within the adopted Kern County Airport Land Use Compatibility Plan and would the project result in a safety hazard or excessive noise for people residing or working in the project area.	Less than Significant	Mitigation is not required.	Less than Significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Impact 4.9-6: The project would impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.	Less than Significant	Mitigation is not required.	Less than Significant
Impact 4.9-7: The project would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	Less than significant	<p>MM 4.9-5: At least 30 days prior to commencement of reclamation activities, the project proponent shall develop and implement a Fire Safety Plan. The project proponent shall submit the plan, along with maps of the project site and access roads, to the Kern County Fire Department for review and approval. A copy of the approved Fire Safety Plan shall be submitted to the Kern County Planning and Natural Resources Department to be kept on file. The Fire Safety Plan shall contain notification procedures and emergency fire precautions, including, but not limited to, the following:</p> <ul style="list-style-type: none"> a. Internal combustion engines, used off-road, shall be equipped with spark arresters. Spark arresters shall be in good working order. b. Light trucks and cars with factory-installed (type) mufflers shall be used only on roads where the roadway is cleared of vegetation. These vehicle types shall maintain their factory-installed (type) mufflers in good condition. c. Fire rules shall be posted on the project bulletin board at the contractor's field office and in areas visible to employees. d. Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials. e. Personnel shall be trained in the practices of the Fire Safety Plan relevant to their duties. Construction and maintenance personnel shall be trained and equipped to extinguish small fires to prevent them from growing into more serious threats. 	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
<p>Impact 4.9-8: The project would generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste. Specifically, the proposed project would exceed the following qualitative thresholds: the presence of domestic flies, mosquitoes, cockroaches, rodents, and/or any other vectors associated with the project is significant when the applicable enforcement agency determines that any of the vectors:</p> <ul style="list-style-type: none"> i. Occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and ii. Are associated with design, layout, and management of project operations; and iii. Disseminate widely from the property; and iv. Cause detrimental effects on the public health or well-being of the majority of the surrounding population. 	Potentially Significant	<p>MM 4.9-6: All food, garbage, and plastic shall be disposed of in closed containers and regularly removed from the site to minimize potential attraction of vectors.</p>	Less than Significant
<p>Impact 4.9-9: The project would contribute to cumulative hazards and hazardous materials impacts.</p>	Potentially Significant	Implement Mitigation Measures MM 4.9-1 through MM 4.9-6 .	Less than significant
4.10 Hydrology and Water Quality			
<p>Impact 4.10-1: The project would violate water quality standards or waste discharge requirements or otherwise substantially degrade surface ground water quality.</p>	Potentially Significant	<p>MM 4.10-1: At least 30 days prior to commencement of reclamation activities if required, the project proponent/operator shall prepare/maintain a Stormwater Pollution Prevention Plan (SWPPP) onsite. The SWPPP shall be designed to minimize runoff and shall specify best management practices to prevent all pollutants from contacting stormwater, with the intent of keeping sedimentation or any other pollutants from moving off-site and into receiving waters. Recommended best management practices may include:</p> <ul style="list-style-type: none"> a. stockpiling and disposing of material properly; b. protecting existing storm drain inlets and stabilizing disturbed areas; 	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		c. implementing erosion controls; d. properly managing reclamation materials; and e. managing waste, controlling litter, and implementing sediment controls. Should a SWPPP not be required by the Regional Water Quality Control Board—Lahontan Region, documentation stating such shall be presented to the Kern County Planning and Natural Resources Department. MM 4.10-2: At least 30 days prior to commencement of reclamation activities, the project proponent/operator shall prepare/amend and have available on site, a Spill Prevention Control and Countermeasures Plan. A copy of the Spill Prevention Control and Countermeasures Plan shall be provided to the Kern County Planning and Natural Resources Department.	
Impact 4.10-2: The project would substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.10-3: The project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion and/or sedimentation on-site or off-site.	Potentially Significant	Implement Mitigation Measure MM 4.10-1 .	Less than significant
Impact 4.10-4: The project would substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would substantially increase the rate or amount of surface runoff which would result in flooding on- or off-site.	Less than significant	Mitigation is not required.	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Impact 4.10-5: The project would substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.	Potentially Significant	Implement Mitigation Measure MM 4.10-1 .	Less than significant
Impact 4.10-6: The project would substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.10-7: The project would risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones.	Less than significant	Implement Mitigation Measure MM 4.10-1 .	Less than significant
Impact 4.10-8: The project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Potentially Significant	Implement Mitigation Measures MM 4.10-1 and MM 4.10-2 .	Less than significant
Impact 4.10-9: The project would contribute to cumulative hydrology and/or water quality impacts.	No Impact	Mitigation is not required.	No Impact
4.11 Land Use and Planning			
Impact 4.11-1: The project would physically divide an established community.	No Impact	Mitigation is not required.	No Impact
Impact 4.11-2: The project would cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less than Significant	Mitigation is not required.	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Impact 4.11-3: The project would contribute to cumulative land use and planning impacts.	Less than significant	Mitigation is not required.	Less than significant
4.12 Mineral Resources			
Impact 4.12-1: The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.12-2: The project would result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.12-3: The project would contribute to cumulative mineral resources impacts.	Less than significant	Mitigation is not required.	Less than significant
4.13 Noise			
Impact 4.13-1: The project would generate a substantial temporary or permanent increase in the ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies.	Less than significant	<p>MM 4.13-1: Within 30 days of the start of project reclamation activities, the project proponent/operator shall establish a Noise Disturbance Coordinator for the proposed project. The Noise Disturbance Coordinator shall be responsible for responding to any complaints about noise. The Noise Disturbance Coordinator shall determine the cause of the complaint and shall be required to implement reasonable measures to resolve the complaint. Contact information for the Noise Disturbance Coordinator shall be submitted to the Kern County Planning and Natural Resources Department .</p> <p>MM 4.13-2: Within 30 days of the start of project reclamation activities, a sign, legible at a distance of 50 feet, shall be posted at the intersection of the project's Primary Access Road with Oak Creek Road. The sign shall state a Reclamation Plan (Mojave Life of Mine Reclamation Plan Amendment Project [Conditional Use Permit 21, Map 197; Conditional Use Permit 46, Map 198]) has</p>	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		been approved for the site, and a telephone number where noise complaints can be registered with the Noise Disturbance Coordinator. Documentation that the sign has been posted shall be provided to the Kern County Planning and Natural Resources Department.	
Impact 4.13-2: The project would generate excessive ground borne vibration or ground borne noise levels.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.13-3: The project would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.13-4: For a project located within the Kern County Airport Land Use Compatibility Plan, the project would expose people residing or working in the project area to excessive noise levels.	No impact	Mitigation is not required.	No impact
Impact 4.13-5: The project would contribute to cumulative noise and vibration impacts.	Less than Significant	Mitigation is not required.	Less than significant
4.14 Public Services			
Impact 4.14-1: The project would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.14-2: The project would contribute to cumulative impacts on public services.	Less than significant	Mitigation is not required.	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
4.15 Transportation			
Impact 4.15-1: The project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.15-2: The project would conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b).	Less than significant	Mitigation is not required.	Less than significant
Impact 4.15-3: The project would substantially increase hazards due to a design feature.	Less than Significant	Mitigation is not required.	Less than significant
Impact 4.15-4: The project would result in inadequate emergency access.	Less than Significant	Mitigation is not required.	Less than significant
Impact 4.15-5: The project would contribute to cumulative transportation and traffic impacts.	Less than Significant	Mitigation is not required.	Less than significant
4.16 Tribal Cultural Resources			
Impact 4.16-1a: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe that is listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k).	Potentially Significant	Implement Mitigation Measures MM 4.5-1 through MM 4.5-3 (see Section 4.5 , <i>Cultural Resources</i>).	Less than significant
Impact 4.16-1b: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe that is a resource determined	Potentially Significant	Implement Mitigation Measures MM 4.5-1 through MM 4.5-3 (see Section 4.5 , <i>Cultural Resources</i>).	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe.			
Impact 4.16-2: The proposed project would contribute to cumulative tribal cultural resources impacts.	Potentially Significant	Implement Mitigation Measures MM 4.5-1 through MM 4.5-3 (see Section 4.5 , <i>Cultural Resources</i>).	Less than significant
4.17 Utilities and Service Systems			
Impact 4.17-1: The project would require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	Potentially Significant	Implement Mitigation Measure MM 4.10-1 (see Section 4.10 , <i>Hydrology and Water Quality</i>).	Less than significant
Impact 4.17-2: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.17-3: The project would result in a determination by the waste water treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	No Impact	Mitigation is not required.	No Impact
Impact 4.17-4: The project would generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	Less than Significant	MM 4.17-1: During reclamation activities as authorized by this approval, debris and waste generated shall be recycled to the extent feasible. Wastes that require special disposal shall be handled according to applicable regulations that are in effect at the time of disposal. a. An on-site Recycling Coordinator shall be designated by the project proponent/operator to facilitate recycling of all waste generated during reclamation activities, through coordination	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
		<p>with the on-site contractors, local waste haulers, and/or other facilities that recycle such wastes.</p> <p>b. The on-site Recycling Coordinator shall also be responsible for ensuring that wastes that require special disposal are handled according to the State and County regulations that are in effect at the time of disposal.</p> <p>c. Contact information of the Recycling Coordinator shall be provided to the Kern County Public Works Department – Waste Management Division prior to commencement of operations as authorized by this approval.</p>	
Impact 4.17-5: The project would comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.	Less than Significant	Implement Mitigation Measure MM 4.17-1 .	Less than significant
Impact 4.17-6: The project would contribute to cumulative impacts to utilities and service systems.	Less than Significant	Implement Mitigation Measure MM 4.10-1 (see Section 4.10, Hydrology and Water Quality) and MM 4.17-1 .	Less than significant
4.18 Wildfire			
Impact 4.18-1: The project could impair implementation of or physically interfere with, an adopted emergency response plan or emergency evacuation plan.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.18-2: The project would expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire due to slope, prevailing winds, and other factors.	Less than significant	Mitigation is not required.	Less than significant
Impact 4.18-3: The project would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	Less than significant	Mitigation is not required.	Less than significant

Table 1-6 Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance before Mitigation	Mitigation Measure(s)	Level of Significance after Mitigation
Impact 4.18-4: The project would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	Less than significant	Implement Mitigation Measures MM 4.7-1 through MM 4.7-2 (see Section 4.7, <i>Geology and Soils</i>), MM 4.9-5 (see Section 4.9, <i>Hazards and Hazardous Materials</i>), and MM 4.10-1 through MM 4.10-2 (see Section 4.10, <i>Hydrology and Water Quality</i>).	Less than significant
Impact 4.18-5: The project would contribute to cumulative wildfire impacts.	Less than significant	Implement Mitigation Measures MM 4.7-1 through MM 4.7-2 (see Section 4.7, <i>Geology and Soils</i>), MM 4.9-5 (see Section 4.9, <i>Hazards and Hazardous Materials</i>), and MM 4.10-1 through MM 4.10-2 (see Section 4.10, <i>Hydrology and Water Quality</i>).	Less than significant

Chapter 2

Introduction

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2.1 Intent of the California Environmental Quality Act

The Kern County Planning and Natural Resources Department (Kern County), as Lead Agency, has determined that, based on preliminary analysis discussed in the Notice of Preparation (included in **Appendix A**, *Notice of Preparation and Comment Letters*), an environmental impact report (EIR) is the appropriate environmental analysis document pursuant to the California Environmental Quality Act (CEQA) for the proposed Mojave Life of Mine Reclamation Plan Amendment Project (project). The proposed Mojave Life of Mine Reclamation Plan Amendment is included as **Appendix B**, *Mojave Life of Mine Reclamation Plan Amendment*, (Sespe 2026) of this EIR.

The proposed project is located in an unincorporated area of the southeastern part of Kern County, approximately 6 miles southeast of the City of Tehachapi and 7.25 miles west of the unincorporated community of Mojave. The project site is within the area mapped on United States Geological Survey (USGS) 7.5-minute Monolith and Willow Springs 7.5-minute topographic quadrangles in all or portions of Sections 13 through 15, 23 through 28, 33, and 34 Township 11 North, Range 14 West (T11N, R14W), San Bernardino Base and Meridian (SBB&M); and portions of Sections 19 and 30, Township 11 north, Range 13 West (T11N, R13W) SBB&M. The project site is approximately 4,367 acres, wholly or within a portion of sixteen privately owned parcels identified as Kern County Assessor's Parcel Numbers (APNs):

237-032-01	237-071-04	237-091-01	237-091-17
237-053-01	237-071-07	237-091-02	237-093-01
237-071-02	237-073-01	237-091-04	237-101-06
237-071-03	237-073-02	237-091-05	237-102-01

In accordance with the Surface Mining and Reclamation Act (SMARA), the County approved a reclamation plan for the facility in 1979 which prescribes reclamation requirements covering approximately 1,542 acres of lands within the project site including mined areas and areas associated with the cement plant. The County has recognized that mining and processing activities are a legal nonconforming (vested) use on approximately 6,658 acres of land owned by the project proponent, inclusive of the approximately 1,542 acres covered by the 1979 reclamation plan.

The project proponent proposes to continue to develop its limestone and construction materials resources within the existing vested properties and to continue the life of the mine by approximately 200 years to meet and maintain the market quality and quantity requirements by utilizing additional material reserves to continue cement and construction materials production. Reclamation of continued operations would require the County's approval of the proposed

project which would amend the existing 1979 reclamation plan through approval of a reclamation plan applicable to approximately 4,367 acres of the vested properties, inclusive of the approximately 1,542 acres currently subject to the 1979 reclamation plan, and an additional approximately 2,825 acres that would be added to the reclamation plan boundary through the proposed amendment. The total amended reclamation plan would cover approximately 4,367 acres. The amended reclamation plan is the proposed project.

Upon cessation of mining activities, the proposed reclamation plan provides for areas within the reclamation plan boundary to be reclaimed and revegetated with native species and reclaimed to open space. Proposed reclamation described in the reclamation plan includes recontouring, stabilizing, revegetation, and monitoring of final slopes and disturbed mining and stockpile areas; reclamation of roads not required for post-reclamation access and security, removal of ancillary equipment and facilities; and removal of the processing and cement plants. Removal of existing rail facilities and wind turbines would not be required under the proposed reclamation plan. The terms “overburden stockpiles”, “overburden/interburden stockpiles”, “interburden/overburden stockpile”, “construction material and interburden/overburden stockpiles”, and “construction material stockpiles” as referenced in this EIR are generally synonymous.

As discussed in more detail in **Chapter 3, *Project Description***, the project proponent is requesting the following discretionary action from Kern County:

- (a) approval of CUP No. 21, Map 197 and CUP No. 46, Map 198 authorizing a reclamation plan amendment for the Mojave Mine that would supersede the existing 1979 reclamation plan and would provide for reclamation of up to approximately 4,367 acres of mined vested lands in accordance with the Surface Mining and Reclamation Act (SMARA) of 1975.

2.1.1 Purpose of the California Environmental Quality Act Process

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

- CEQA (California Public Resources Code [PRC], Section 21000 et Seq.);
- State CEQA *Guidelines* (California Code of Regulations [CCR], Title 14, Chapter 3, Section 15000 et seq.); and
- Kern County CEQA Implementation Document

The overall purposes of CEQA are to:

- Avoid or reduce significant environmental impacts of discretionary projects initiated by public agencies or private concerns;
- Provide for full disclosure of the project’s environmental effects to the public, the agency decision makers who will approve or deny the project, and responsible and

trustee agencies charged with managing resources (e.g., wildlife, air quality) that may be affected by the project; and

- Provide a forum for public participation in the decision-making process with respect to environmental effects.

2.2 Purpose of this Environmental Impact Report

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

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

An EIR also discloses growth-inducing impacts, impacts found not to be significant, and significant cumulative impacts of past, present, and reasonably foreseeable future projects.

CEQA requires an EIR to reflect the independent judgment of the Lead Agency with respect to impacts, disclose the level of significance of the impacts both with and without mitigation, and describe mitigation measures proposed to reduce the impacts. An EIR is circulated to responsible agencies, trustee agencies with resources affected by the project, and interested agencies and individuals. The review process gives both agencies and individuals an opportunity to share expertise, discuss agency analyses, check for accuracy, detect omissions, discover public concerns, and solicit mitigation measures and alternatives capable of avoiding or reducing the significant effects of the project while still attaining most of the basic objectives of the project.

Reviewers of an EIR are requested to focus on the sufficiency of the document (i.e., the thoroughness of its identification and analysis of possible impacts on the environment as well as ways to avoid or mitigate such impacts). Comments are most helpful when they suggest better ways to avoid or mitigate significant environmental impacts (e.g., through additional alternatives or mitigation measures).

2.2.1 Issues to Be Resolved

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

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

2.3 Terminology

The terms listed below are defined to assist reviewers in understanding this EIR:

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

related to a physical change may be considered in determining whether the physical change is significant.

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

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

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

2.4 Decision-Making Process

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

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

- **Notice of Preparation (NOP).** The Lead Agency prepared and circulated an NOP for 30 days to responsible, trustee, and local agencies for review and comment beginning on August 28, 2024. The NOP and comments received during the circulation of the NOP are included in Appendix A of this EIR. In conjunction with this public notice, Kern County held a scoping meeting on September 24, 2024, to provide a forum for public comments on the scope of the EIR.
- **Draft EIR Preparation/Notice of Completion (NOC).** A Draft EIR is circulated for review and comment to appropriate agencies and additional individuals and interest groups who have requested to be notified of EIR projects. Per Section 15105 of the State CEQA *Guidelines*, the Lead Agency will provide for a 45-day public review period on the Draft EIR. The Lead Agency will subsequently respond to each comment on the Draft EIR that is timely submitted and received in writing through a Response to Comments chapter in the Final EIR. The Response to Comments chapter will be provided to each agency or person who provided written comments on the EIR at least 10 days prior to certification of the EIR.
- **Preparation and Certification of Final EIR.** The Kern County Planning Commission and, if appealed, the Board of Supervisors will consider the Final EIR and all public comments on the project itself before final action on the project. The Planning Commission and, if appealed, Board of Supervisors will hold at least one public hearing to consider the Final EIR, take public testimony, and then approve, conditionally approve, or deny the project.

2.4.1 Notice of Preparation

Pursuant to Section 15082 of the State CEQA *Guidelines*, as amended, the Kern County Planning and Natural Resources Department circulated an NOP to responsible and affected agencies and other interested parties for a 30-day public review period that began on August 28, 2024, and ended on September 27, 2024. The NOP was also posted in the Kern County Clerk's office for 30 days and sent to the State Clearinghouse at the Governor's Office of Land Use and Climate Innovation (LCI) to solicit statewide agency participation in determining the scope of the EIR.

The purpose of the NOP is to formally convey that the Kern County Planning and Natural Resources Department, as the Lead Agency under CEQA, solicited input regarding the scope

and proposed content of the EIR. The NOP and all comment letters are provided in **Appendix A, Notice of Preparation and Comment Letters**, of this EIR.

2.4.2 Scoping Meeting

Pursuant to Section 15082(c)(1) of the State CEQA *Guidelines*, for projects of statewide, regional, or areawide significance, the Lead Agency is required to conduct at least one scoping meeting. The scoping meeting is for jurisdictional agencies and interested persons or groups to provide comments regarding, but not limited to, the range of actions, alternatives, mitigation measures, and environmental effects to be analyzed. Kern County hosted a scoping meeting at 1:30 p.m. on September 24, 2024, at the Kern County Planning and Natural Resources Department, 2700 “M” Street, Suite 100, Conference Room 1A, Bakersfield, California.

Notice of Preparation and Scoping Meeting Results

No verbal comments were received at the September 24, 2024, scoping meeting. Specific environmental concerns raised in written comments received during the NOP public review period are discussed below. The NOP and all comments received are included in **Appendix A**, along with the Summary from the Scoping Meeting.

Notice of Preparation/Initial Study Written Comments

The following specific environmental concerns listed in **Table 2-1, Summary of Public Comments Received on the NOP Circulated August 28, 2024, to September 27, 2024**, were received in writing by the County in response to the NOP public review period commencing on August 28, 2024, and ending on September 27, 2024. Additionally, **Table 2-2, Summary of Public Comments Received on the NOP Subsequent to the August 28, 2024, to September 27, 2024, Public Notice Period**, provides a summary of comment letters that were received in writing by the County in response to this same NOP public review period, but were received after the close of the comment period.

Table 2-1 Summary of Public Comments Received on the NOP Circulated August 28, 2024 to September 27, 2024

Commenter	Summary of Comment
Federal Agencies	
No federal agencies provided comments on the NOP.	
State Agencies	
California Native American Heritage Commission, August 29, 2024	The California Native American Heritage Commission (NAHC) provided a letter recommending consultation with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.
California High-Speed Rail Authority	The California High-Speed Rail Authority (CHSRA) provided a letter advising that the project site overlaps with the California High-Speed Rail

Table 2-1 Summary of Public Comments Received on the NOP Circulated August 28, 2024 to September 27, 2024

Commenter	Summary of Comment
September 27, 2024	Phase 1 Alignment between Bakersfield and Palmdale near Tehachapi Willow Springs Road and that CHRSA believes the project that straddles Tehachapi Willow Springs Road is in direct conflict with the adopted HSR alignment. The letter also advises that the HSR alignment and design was modified to protect the HSR from potential damage from flyrock and to modify HSR at its crossing of the Pacific Crest Trail (PCT). CHSRA notes that if the project proceeds as proposed, it will likely result in conflicts with the rail alignment related to transportation, air quality, land use, and recreational use of the PCT.
Lahontan Regional Water Quality Control Board September 27, 2024.	Lahontan Regional Water Quality Control Board (RWQCB) provided a letter encouraging the project proponent to establish low-impact development (LID) implementation strategies, establish specific stormwater control measures and implementation strategies, and preparation of a storm water pollution prevention plan (SWPPP) in accordance with the requirements of National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Water Quality Order (WQO) 2022-0057-DWQ. The letter also advised that permits may be necessary including a Clean Water Act (CWA), Section 401 water quality certification for impacts to federal waters (waters of the U.S.) or dredge and fill waste discharge requirements for impacts to non-federal waters.
Native American Tribe/Organization	
No Native American tribes or organizations provided comments on the NOP.	
Local Agencies	
Kern County Public Works Department September 6, 2024	Kern County Public Works Department advised that the Development Review Division, Floodplain Management Division, Sewer and Water Division, and CSA Division each reviewed the project and had no comments.
Kern County Fire Department, Office of the Fire Marshall, Fire Prevention Unit September 4, 2024	Kern County Fire Department (KCFD) advised that on initial review the Fire Prevention Unit determined there are no Fire Code concerns regarding the project.
Non-Governmental Organizations	
No non-governmental organizations provided comments on the NOP.	
Members of the Public	
Gene Opittek September 16, 2024	<ul style="list-style-type: none"> Commenter expressed concerns about dust impacts and the height of stockpiles #1, #3, and #4, associated with shadows that

Table 2-1 Summary of Public Comments Received on the NOP Circulated August 28, 2024 to September 27, 2024

Commenter	Summary of Comment
	<p>might impact the solar power generation on parcel 237-093-03 and other neighboring parcels.</p> <ul style="list-style-type: none"> • Commenter noted that California HSR alignment routing runs north-south through Commenter's parcel APN# 237-093-09 and questions how mining or HSR can proceed and if rerouting is expected.

Table 2-2 Summary of Public Comments Received on the NOP Subsequent to the August 28, 2024 to September 27, 2024 Public Notice Period

Commenter	Summary of Comment
State Agencies	
California Department of Fish and Wildlife October 4, 2024	California Department of Fish and Wildlife (CDFW) submitted a letter with comments and recommendations including that the EIR should evaluate and address animal and plant species specifically listed in the letter, advised identifying an appropriate resource study area for evaluation of potential cumulative impacts, noted requirements for consultation with CDFW in the event that species listed under the California Endangered Species Act (CESA) are detected and recommended retaining a qualified biologist during project activities to determine if potential impacts to CESA-listed species require a 2081 Incidental Take Permit (ITP), recommended the EIR include information required to address streambed alteration and potential need to obtain a 1600 Lake and Streambed Alteration (LSA) Agreement, and recommended an alternatives analysis that considers whether reclamation activities would be able to feasibly restore habitat within the site when considering post-mining conditions, mine pit and overburden slopes, soils and vegetation, and remnant hydrology. The letter also noted that CEQA requires that information development in CEQA documents be incorporated into the California Natural Diversity Database (CNDDDB) and advised of CEQA document filing fees.
State Clearinghouse October 8, 2024	The commenter acknowledged receipt of the NOP.

2.4.3 Availability of the Draft EIR

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

Kern County Planning and Natural Resources Department
2700 "M" Street, Suite 100

Bakersfield, CA 93301-2370
Phone: (661) 862-8600, Fax: (661) 862-8601

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

Additionally, this EIR is available at the following libraries:

California State University Bakersfield – Library 9001 Stockdale Highway Bakersfield, CA 93309	Kern County Library/Beale Local History Room 701 Truxtun Avenue Bakersfield, CA 93301	Kern County Library/ Tehachapi Branch 212 S. Green Street, Tehachapi, CA 93561
Kern Library/ Mojave Branch 15555 O Street Mojave, CA 93501		

2.5 Format and Content

This EIR addresses the potential environmental effects of the project and was prepared with input from the public and the responsible and affected agencies during the EIR scoping process, as discussed previously. The contents of this EIR are based on the findings in the NOP and public agency input. According to the findings of the NOP, a determination was made that an EIR would be required to address potentially significant environmental impacts related to the following resource areas:

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

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

- Recreation
- Population and Housing

Additionally, no comments were received during circulation of the NOP indicating that additional impacts would need to be addressed. No further discussion of these resources is warranted. For a complete analysis of these resources, please refer to Appendix A of this EIR.

2.5.1 Required EIR Content and Organization

This EIR includes all the sections required by the State CEQA *Guidelines*, which are listed in **Table 2-3, Required EIR Contents**, along with a reference to the chapter in which they can be found within this document.

Table 2-3 Required EIR Contents

Requirement (CEQA/Section)	Location in EIR
Table of Contents (Section 15122)	Table of Contents
Summary (Section 15123)	Chapter 1
Project Description (Section 15124)	Chapter 3
Significant Environmental Impacts (Section 15126.2)	Chapter 4
Environmental Setting (Section 15125)	Chapter 4
Mitigation Measures (Section 15126.4)	Chapter 4
Cumulative Impacts (Section 15130)	Chapter 4
Growth-Inducing Impacts (Section 15126.2)	Chapter 5
Effects Found Not to Be Significant (Section 15128)	Chapters 1, 4, and 5
Significant Irreversible Changes (Section 15126.2)	Chapter 5
Unavoidable Significant Environmental Impacts (Section 15126.2)	Chapters 4 and 5
Alternatives to the Project (Section 15126.6)	Chapter 6
List of Preparers (Section 15129)	Chapter 9
References (Section 15129)	Chapter 10

The content and organization of this EIR is designed to meet the requirements of CEQA and the State CEQA *Guidelines*, and present issues, analyses, mitigation, and other information in a logical and understandable way. This EIR is organized into the sections listed below:

- **Chapter 1, Executive Summary**, provides a summary of the project description and the environmental impacts and mitigation measures that are identified in the EIR.
- **Chapter 2, Introduction**, provides CEQA compliance information, an overview of the decision-making process, information regarding the organization of the EIR, and a responsible and trustee agency list.
- **Chapter 3, Project Description**, provides a description of the location, characteristics, and objectives of the proposed project, as well as its relationship to applicable plans and policies.
- **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures**, contains a description of the existing conditions and a detailed environmental analysis of the

project impacts, mitigation measures, and unavoidable adverse impacts for each environmental category.

- **Chapter 5, *Consequences of Project Implementation***, presents an analysis of the project's contribution to cumulative and growth-inducing impacts as well as other CEQA requirements, including significant and unavoidable impacts and irreversible commitments of resources.
- **Chapter 6, *Alternatives***, describes a reasonable range of alternatives to the project that could reduce significant environmental effects that cannot be avoided.
- **Chapter 7, *Responses to Comments***, is reserved for responses to comments on this EIR.
- **Chapter 8, *Organizations and Persons Consulted***, lists the organizations and persons contacted during preparation of this EIR.
- **Chapter 9, *List of Preparers***, identifies persons involved in the preparation of the EIR.
- **Chapter 10, *Bibliography***, identifies reference sources for the EIR.
- **Chapter 11, *Acronyms and Abbreviations***, provides a list of acronyms and abbreviations used within the EIR.
- *Appendices* provide information and technical studies that support the environmental analysis contained within the EIR.

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

- *Introduction* provides a brief overview on the purpose of the section being analyzed with regards to the project.
- *Environmental Setting* describes the physical conditions that exist at this time (and as applicable at the time mining is complete but reclamation has not yet commenced), and may influence or affect the topic being analyzed.
- *Regulatory Setting* provides Federal, State, and local laws and the *Kern County General Plan* goals, policies, and implementation measures that apply to the topic being analyzed.
- *Impacts and Mitigation Measures* discusses the impacts of the project in each category, presents the determination of the level of significance, and provides a discussion of feasible mitigation measures to reduce any impacts.
- *Cumulative Setting, Impacts, and Mitigation Measures* provides a discussion of the cumulative geographic area for each resource area, and analysis of whether the proposed project would contribute to a significant cumulative impact, and if so, identifies cumulative mitigation measures.

2.6 Responsible and Trustee Agencies

Projects or actions undertaken by the Lead Agency, in this case Kern County, may require subsequent oversight, approvals, or permits from other public agencies in order to be

implemented. Other such agencies are referred to as responsible agencies and trustee agencies. Pursuant to Sections 15381 and 15386 of the State CEQA *Guidelines*, as amended, responsible agencies and trustee agencies are defined as follows:

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

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

- Federal Agencies
 - U.S. Bureau of Land Management (BLM)
 - U.S. Fish and Wildlife Service (USFWS)
 - U.S. Environmental Protection Agency (USEPA)
- State Agencies
 - California Department of Conservation, Geologic Energy Management Division (CalGEM)
 - California Department of Conservation, Division of Mine Reclamation
 - State Water Resources Control Board (SWRCB)
 - California Department of Fish and Wildlife (CDFW)
 - California Department of Transportation (Caltrans)
 - California Air Resources Board (CARB)
 - California Native American Heritage Commission (NAHC)
 - Governor's Office of Land Use and Climate Innovation (LCI)
- Local Agencies
 - Eastern Kern Air Pollution Control District (EKAPCD)
 - Regional Water Quality Control Board, Lahontan Region (Lahontan RWQCB)
- Kern County
 - Kern County Public Works Department
 - Kern County Public Health Services Department
 - Kern County Fire Department

2.7 Incorporation by Reference

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

2.7.1 Kern County General Plan and Cameron Canyon Specific Plan

The *Kern County General Plan* is a policy document with land use maps and related information. It is designed to give long-range guidance to those Kern County officials who make decisions that affect the growth and resources in unincorporated Kern County, excluding the Metropolitan Bakersfield Planning Area. This document, adopted on June 14, 2004, and last amended on September 22, 2009, helps to ensure that day-to-day decisions conform to the long-range program designed to protect and further the public interest as related to Kern County's growth and development, and to mitigate environmental impacts. The General Plan also serves as a guide to the private sector of the economy so that development initiatives conform to Kern County's public plans, objectives, and policies.

The *Cameron Canyon Specific Plan* is a detailed study of the Cameron Canyon area prepared for the purpose of guiding present and future land uses and development. Each of the nine elements that are required as part of the *Kern County General Plan* have been addressed to the degree that they apply to Cameron Canyon. The document, certified on July 23, 1986, has been designed to act as an integral components of the *Kern County General Plan* and is consistent with the adopted Countywide goals and policies.

2.7.2 Kern County Zoning Ordinance

According to Chapter 19.02.020, *Purposes*, of the Kern County Zoning Ordinance, Title 19 was adopted to promote and protect the public health, safety, and welfare through the orderly regulation of land uses in unincorporated areas of Kern County. The specific purposes of this title are listed below:

- Provide the economic and social advantages resulting from an orderly planned use of land resources;
- Encourage and guide development consistent with the *Kern County General Plan*;
- Divide Kern County into zoning districts, the number, size, and location of which would be deemed necessary to carry out the purposes of the *Kern County General Plan* and Title 19;
- Regulate the size and use of lots, yards, and other open spaces;
- Regulate the use, location, height, bulk, and size of buildings and structures;
- Regulate the intensity of land use;

- Regulate the density of population in residential areas;
- Establish requirements for off-street parking;
- Regulate signs and billboards; and
- Provide for the enforcement of the regulations of Chapter 19.02.

2.7.3 Kern County Zoning Ordinance, Chapter 19.100, Surface Mining Operations

The purpose of this chapter is to regulate surface mining operations consistent with the requirements of the California Mining and Reclamation Act (PRC Sections 2710 et seq.) and the State Policy for Surface Mining and Reclamation Practice (Title 14 of the California Administrative Code, Sections 3500 et seq.). The requirements of this chapter apply to any surface mining operation undertaken in unincorporated Kern County, except for those operations specifically exempted by PRC Sections 2714 or 2776.

2.7.4 Regional Transportation Plan and Sustainable Communities Strategy

The latest Regional Transportation Plan (RTP) was adopted on July 21, 2022. The RTP is a 24-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It has been developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between Federal, State, regional, and local agencies. The RTP provides the Sustainable Communities Strategy (SCS) required by California's Sustainable Communities and Climate Protection Act of Senate Bill (SB) 375. The California Air Resources Board (CARB) set Kern County greenhouse gas (GHG) emissions reductions from passenger vehicles and light-duty trucks at 9 percent per capita by 2020 and 15 percent per capita by 2035 as compared to 2005. In addition, SB 375 provides for closer integration of the RTP/SCS with the Regional Housing Needs Allocation (RHNA) ensuring consistency between low-income housing need and transportation planning. The Kern Council of Governments (Kern COG) engaged in the RHNA process concurrently with the development of the RTP. This process required Kern COG to work with its member agencies to identify areas within the region that can provide sufficient housing for all economic segments of the population and ensure that the State's housing goals are met (Kern COG 2022).

2.8 Sources

This EIR depends on information from many sources. Some sources are studies or reports that have been prepared specifically for this document. Other sources provide background information related to one or more issue areas that are discussed in this document. The sources and references used in the preparation of this EIR are listed in **Chapter 10, Bibliography**, and are available for review during normal business hours at:

Kern County Planning and Natural Resources Department
2700 “M” Street, Suite 100
Bakersfield, California 93301-2370

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

Chapter 3

Project Description

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3.1 Project Overview

This Environmental Impact Report (EIR) has been prepared by the Kern County Planning and Natural Resources Department (Kern County), which is the Lead Agency, to identify and evaluate potential environmental impacts associated with the implementation of the proposed project. CalPortland Company (CalPortland; the project proponent) is requesting the County's approval of a reclamation plan amendment for the Mojave Mine (CA Mine ID No. 91-15-0032) in accordance with the Surface Mining and Reclamation Act of 1975 (SMARA). The Mojave Mine is an existing limestone and construction materials mining, processing, and cement production facility. The proposed project is a reclamation plan that would cover approximately 4,367 acres, which if approved would supersede the existing 1979 reclamation plan which covers approximately 1,542 acres.

The proposed project is located in an unincorporated area of the southeastern part of Kern County, approximately 6 miles southeast of the City of Tehachapi and 7.25 miles west of the unincorporated community of Mojave. The project site is within the area mapped on United States Geological Survey (USGS) 7.5-minute Monolith and Willow Springs 7.5-minute topographic quadrangles in all or portions of Sections 13 through 15, 23 through 28, 33, and 34 Township 11 North, Range 14 West (T11N, R14W), San Bernardino Base and Meridian (SBB&M); and portions of Sections 19 and 30, Township 11 North, Range 13 West (T11N, R13W) SBB&M. The project site is approximately 4,367 acres, wholly or within a portion of sixteen privately owned parcels identified as Kern County Assessor's Parcel Numbers (APNs):

237-032-01	237-071-04	237-091-01	237-091-17
237-053-01	237-071-07	237-091-02	237-093-01
237-071-02	237-073-01	237-091-04	237-101-06
237-071-03	237-073-02	237-091-05	237-102-01

In accordance with SMARA, the County approved a reclamation plan for the facility in 1979 which prescribes reclamation requirements covering approximately 1,542 acres of lands within CalPortland properties including mined areas and areas associated with the cement plant. The aforementioned 1979 reclamation plan was approved by the Kern County Board of Zoning Adjustment per Resolution No. 82-79, approved April 26, 1979, pertaining to Conditional Use Permit (CUP) No. 2, Map 197 and Conditional Use Permit No. 5, Map 198. At that time, the County recognized that the operation pre-dated the adoption of zoning for the area and the operation was, therefore, a legal non-conforming use (i.e., vested). Subsequently, in 2002, amendment and deletion of conditions was approved to allow the usage of large diameter boulders in lieu of fencing or trenching, and elimination of the requirement to stain exposed quarry faces visible from the site (per Planning Commission Resolution No. 171-02, approved October 10, 2002, pertaining to CUP No. 2, Map No. 197; and Planning Commission Resolution No. 172-02, approved October 10, 2002, pertaining to CUP No. 5, Map No. 198).

In 2021, the County determined that mining and processing activities are a legal nonconforming (vested) use on approximately 6,658 acres of land owned by the project proponent, inclusive of the 1,542 acres covered by the 1979 reclamation plan; however the right to continue surface mining operations is subject to a County-approved and valid Reclamation Plan and adequate Financial Assurances.

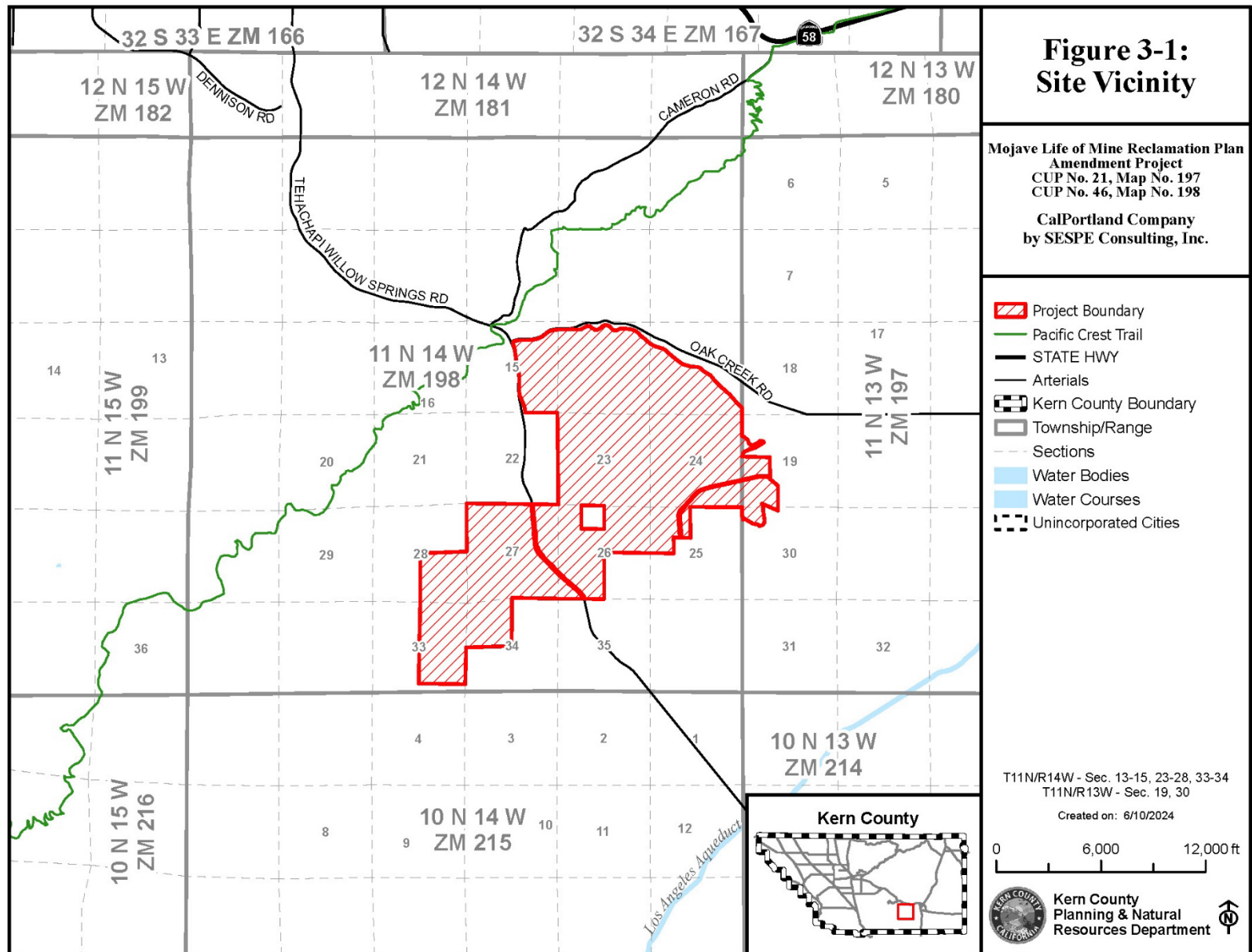
The project proponent proposes this reclamation plan amendment in order to allow for continued reclamation of mineral resource development activities within the vested properties to provide a stable and economically viable source of limestone and construction materials feedstock to CalPortland's existing cement and processing plants in order to produce cement and construction materials to meet and maintain the market quality and quantity requirements needed for local and regional markets. The continuation of operations throughout the vested properties requires the County's approval of the proposed project to amend and replace the existing 1979 reclamation plan through approval of a reclamation plan applicable to approximately 4,367 acres of the vested properties inclusive of most of the 1,542 acres currently subject to the 1979 reclamation plan. An increase of approximately 2,825 acres would bring the reclamation plan boundary through the proposed amendment to a total of approximately 4,367 acres.

Upon cessation of mining activities, the proposed reclamation plan provides for the disturbed areas within the reclamation plan boundary to be reclaimed to open space as described in the proposed reclamation plan, including revegetation with native species for disturbed areas. Pit slopes, benches, and quarry floors within the unfilled pits (Pits A, B, C and D) would not be revegetated, due to the presence of hard rock / unsuitable growth medium. The site of the cement plant and surrounding area would be revegetated. Proposed reclamation includes recontouring, stabilizing, revegetation, and monitoring of most final slopes and disturbed mining and stockpile areas; reclamation of roads not required for post-reclamation access and security, removal of ancillary equipment and facilities; and removal of the processing plant and cement plant and all cement plant related facilities. The proposed reclamation plan does not include removal of any rail facilities outside the reclamation plan boundary, nor the removal of any wind turbines.

3.2 Project Site

3.2.1 Regional Setting

The project area is in the southeastern portion of unincorporated Kern County, situated in the Mojave Desert on the southeastern edge of the Tehachapi Mountains (**Figure 3-1, Site Vicinity**). The project site is in the northwestern portion of the Mojave Desert Air Basin (MDAB), which encompasses the desert portion of San Bernardino County and Los Angeles County, the Palo Verde Valley in eastern Riverside County, and the southeastern portion of Kern County. The desert climate is characterized by hot, dry summers and cold, dry winters. The inland position of the MDAB lacks the cooling effects of the Pacific Ocean, while the presence of the mountains that separate the MDAB from the ocean remove much of the atmospheric moisture before reaching the MDAB. Therefore, the region is relatively dry with little precipitation in the summer or winter.



Summer high temperatures reach over 100 degrees Fahrenheit (°F) and averages in the mid to upper 90s with lows in the upper 60s to low 70s. Extreme highs reach over 110° F. Winter highs average in the 60s with lows in the 30s. About 65 percent of the precipitation in the MDAB occurs as rainfall during the winter. The project area receives an average of approximately 6 inches of rain per year.

3.2.2 Project Location

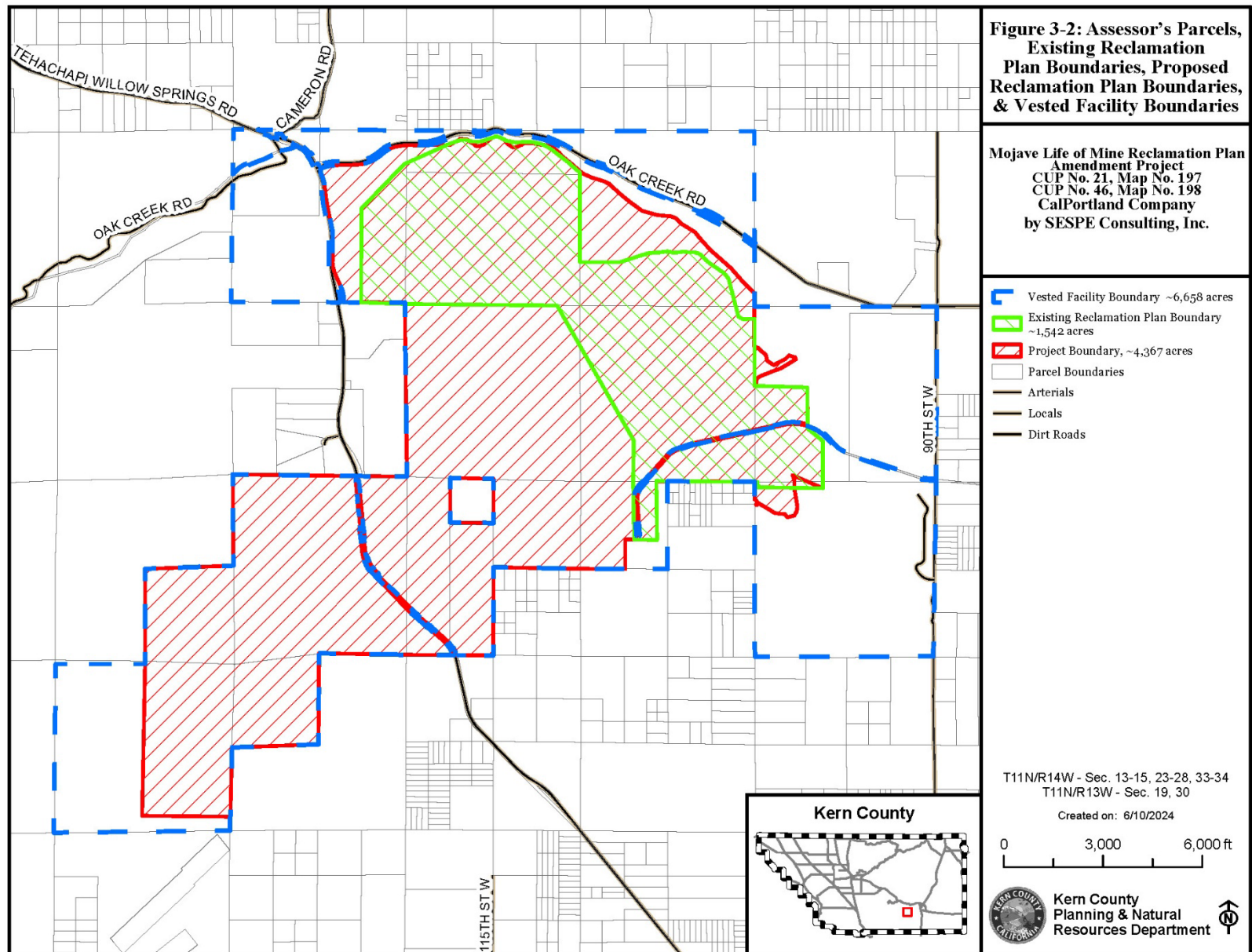
The project site is within the area mapped on United States Geological Survey (USGS) 7.5-minute Monolith and Willow Springs 7.5-minute topographic quadrangles in all or portions of Sections 13 through 15, 23 through 28, 33, and 34 Township 11 North, Range 14 West (T11N, R14W), San Bernardino Base and Meridian (SBB&M); and portions of Section 19 and 30, Township 11 North, Range 13 West (T11N, R13W) SBB&M. The project site is located in an unincorporated area of the southeastern part of Kern County, approximately 6 miles southeast of the City of Tehachapi and 7.25 miles west of the unincorporated community of Mojave. (**Figure 3-2, Assessor's Parcels, Existing Reclamation Plan Boundaries, Proposed Reclamation Plan Boundaries, and Vested Facility Boundaries**).

Site Access

The project site is bounded on the north by Oak Creek Road and is bisected by Tehachapi Willow Springs Road. The portion of the project site east of Tehachapi Willow Springs Road is accessed from an existing approximately 1-mile-long private access road that connects to Oak Creek Road approximately 3.5 miles east of Tehachapi Willow Springs Road. Access to the project site west of Tehachapi Willow Springs Road is via an existing access point along Tehachapi Willow Springs Road which bisects the southwestern portion of the site; an additional access point along Tehachapi Willow Springs Road to provide access to the project site west of Tehachapi Willow Springs Road may potentially be established in the future at a location yet to be determined. Site access roads are shown on **Figure 3-3, Aerial Photograph Map**. **Figure 3-6, Site Overview Existing Conditions**, illustrates continued mining that would be subject to the proposed reclamation plan.

General Plan Land Use Map Code Designations, Zone Classifications, and Existing Land Use

The existing land use, General Plan Land Use Designations, and Zoning Classifications for the project site are identified in **Table 3-1, Project Assessor Parcel Numbers, Existing General/Specific Plan Map Code, Zoning, and Approximate Acreages**, and shown on **Figure 3-4, Existing General/Specific Plan Designations**, and **Figure 3-5, Existing Zoning Classifications**.



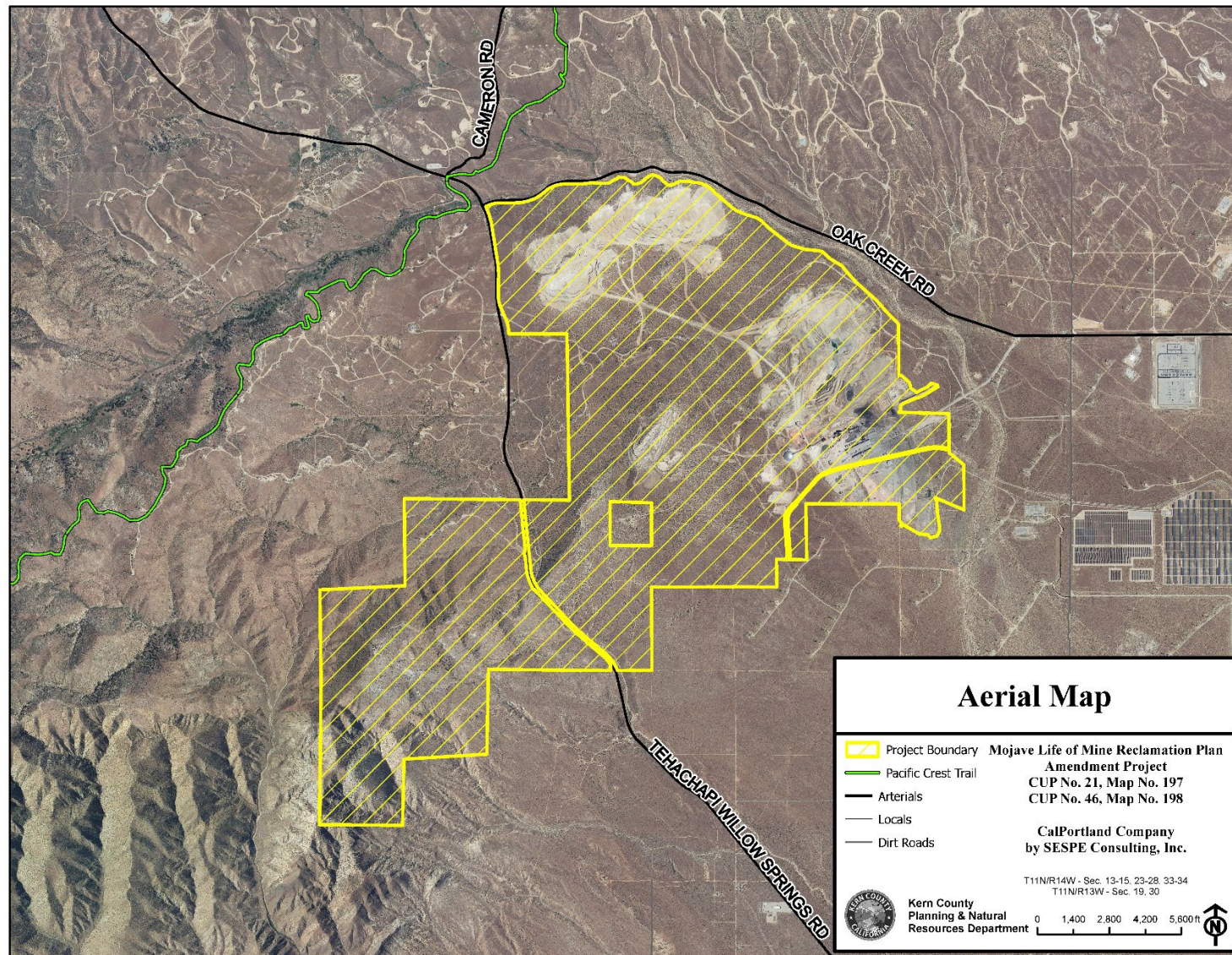
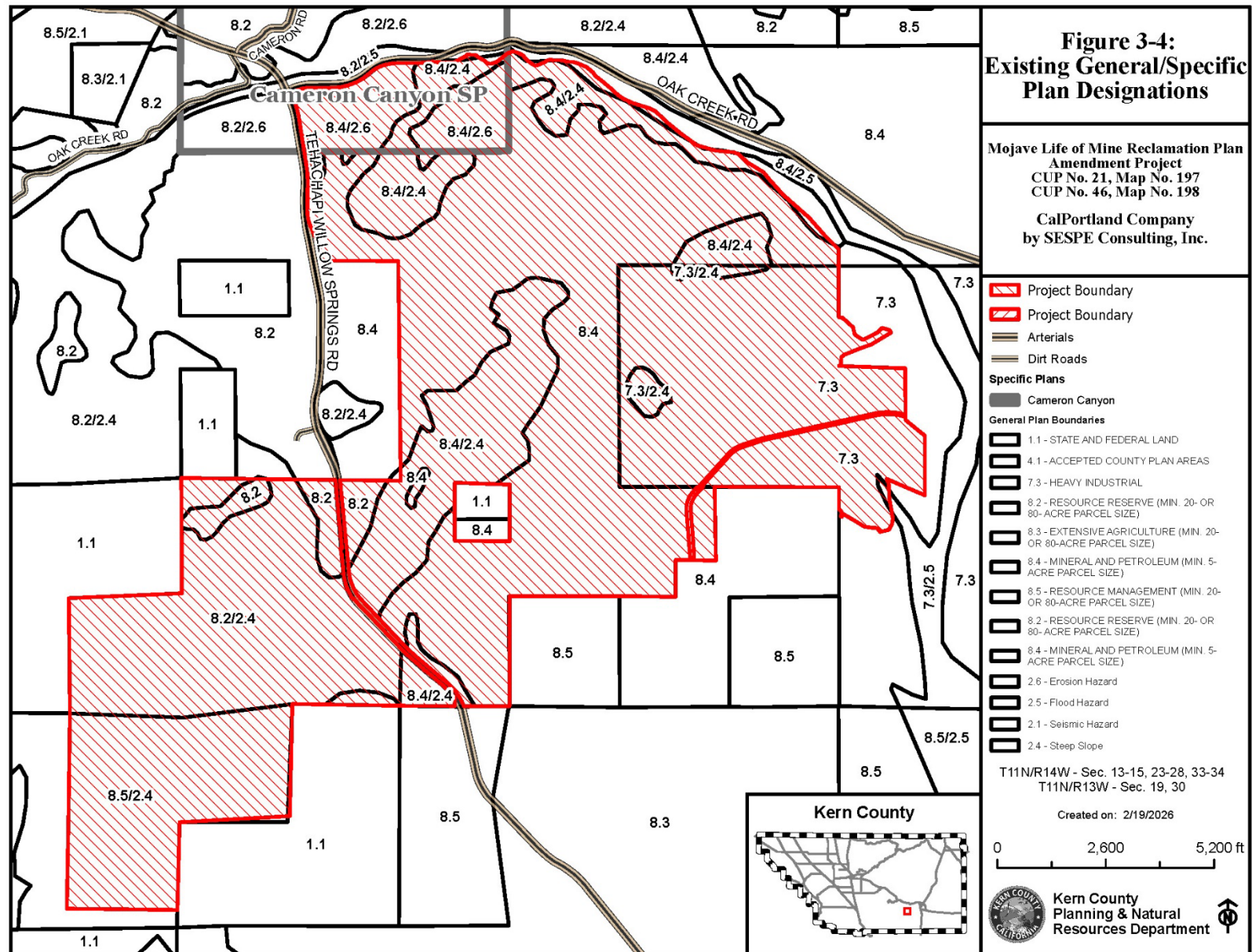
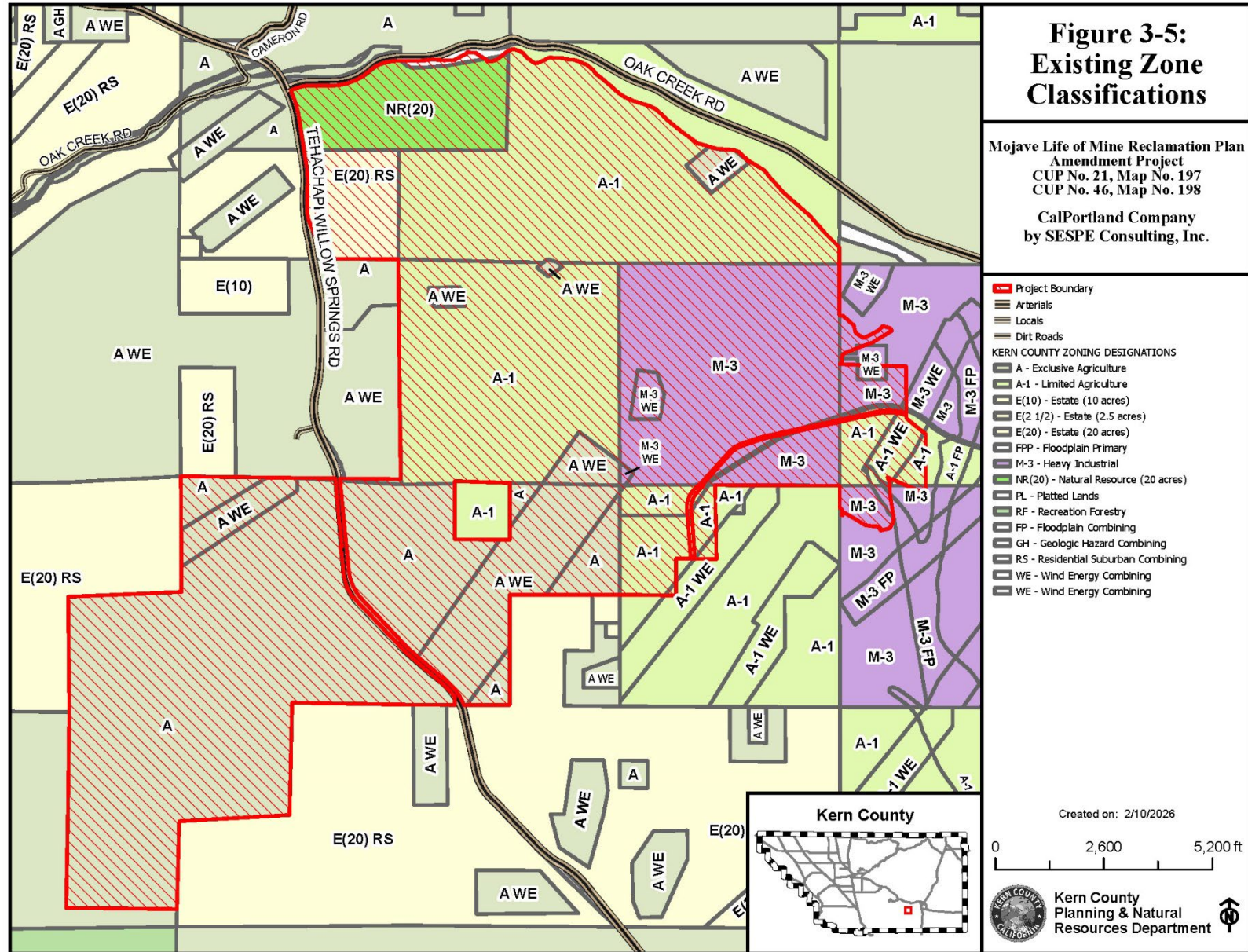
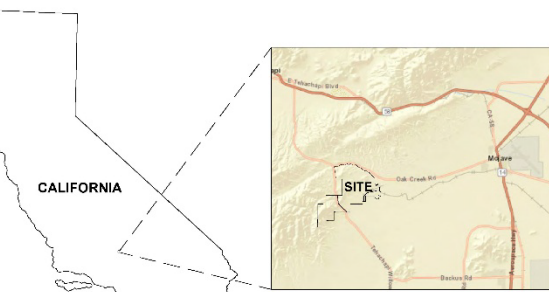


Figure 3-3
Aerial Photograph Map







CALPORTLAND MOJAVE MINE
CUP 2, MAP 197 & CUP 5, MAP 198
CALIFORNIA MINE ID 91-15-0032

PROPOSED USE:	EXISTING AGGREGATE MINE AND PERMITTED PROCESSING FACILITIES
APPLICANT: OPERATOR: FEE LAND OWNER:	CALPORTLAND COMPANY 2025 EAST FINANCIAL WAY GLENORA, CALIFORNIA 91741
PROJECT ADDRESS:	9350 OAK CREEK ROAD MOJAVE, CALIFORNIA 93501
PLAN DESIGN:	CALPORTLAND COMPANY 2025 EAST FINANCIAL WAY GLENORA, CALIFORNIA 91741
MAP PREPARER:	SESP Consulting, Inc. 374 POLI STREET, SUITE 200 VENTURA, CALIFORNIA 93001
LEAD AGENCY:	COUNTY OF KERN PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT 2700 M STREET, #100 BAKERSFIELD, CALIFORNIA 93301

KNOWLEDGE OF THE SITE'S GENERAL GEOLOGIC CONDITIONS IS BASED MAINLY ON DIBBLEE (1963) AND THE GEOLOGIC MAP OF THE TEHACHAPI QUADRANGLE (DIBBLEE AND LOUKE 1970).

CRYSTALLINE ROCKS OF PRE-TERTIARY AGE AT THE SITE ARE COMPOSED OF PLUTONIC IGNEOUS ROCKS AND METAMORPHIC ROCKS THAT TOGETHER FORM THE CRYSTALLINE BASEMENT. METAMORPHIC ROCKS OCCUR AS ISOLATED PENDANTS WITHIN THE GRANITIC ROCKS. THE BEAN CANYON FORMATION OCCURS WITHIN THE GRANITIC ROCKS IN THE SOUTHERN FOOTHILLS OF THE TEHACHAPI MOUNTAINS AS ISOLATED PENDANTS THAT ARE ELONGATED NORTH-EAST PARALLEL TO THE MOUNTAIN FRONT. IN THE LARGEST PENDANT, THE BEAN CANYON FORMATION IS REPORTEDLY 5,000 FEET THICK. THE BEAN CANYON FORMATION CONSISTS OF MARBLE, SCHIST, AND MINOR HORNFELS. THE PLUTONIC ROCKS ARE, LIKE MESOZOIC TO CRETACEOUS IN AGE, RANGING IN COMPOSITION FROM HORNBLENDE DIORITE TO GRANITE, BUT ARE PREDOMINANTLY QUARTZ MONZONITE.

DIBBLE (1963) NOTES THAT THE SCHIST UNIT IS GENERALLY NOT A SCHIST IN THE STRICT SENSE BUT APPROACHES PHYLLITE OR EVEN ARGILLITE IN CHARACTER. THE SCHIST IS FINE-GRAINED AND CHARACTERIZED BY FAINT TO CONSPICUOUS BEDDING EXPRESSED BY COLOR CHANGES AND PLATY CLEAVAGE OR FOLIATION PARALLEL TO BEDDING.

THE MARBLE UNITS OF THE BEAN CANYON FORMATION ARE LIMESTONE RECRYSTALLIZED TO MARBLE. COMPOSED OF CARBONATE AND LOCALLY DOLOMITE. THE GRAIN SIZES RANGE FROM 1 MILLIMETER (MM) TO MORE THAN 5 MM AND ARE FREQUENTLY INTERCALATED FINE- AND COARSE-GRAINED MARBLE. THE LIMESTONE IS PARTICULARLY COARSE NEAR GRANITIC CONTACTS. THE MARBLE OCCURS AS STRATA OF VARYING THICKNESS UP TO APPROXIMATELY 1,200 FT BUT GENERALLY CONSIDERABLY THINNER. THIN LAYERS OF LIMESILICATE HORNFELS ARE ASSOCIATED WITH THE MARBLE NEAR THE INTRUSIVE CONTACTS.

THE CONTACTS OF THE ROOF PENDANT METAMORPHIC ROCKS WITH THE QUARTZ MONZONITE ARE GENERALLY SHARP AND ARE COMMONLY STEEPLY DIPPING UNDER THE PENDANTS. THE QUARTZ MONZONITE IS A MEDIUM- TO COARSE-GRAINED GRANITIC ROCK COMPOSED OF APPROXIMATELY EQUAL PERCENTAGES OF QUARTZ, POTASSIUM FELDSPAR, AND PLAGIOCLASE WITH A SMALL PERCENTAGE OF BIOTITE AND HORNBLende.

THE STRUCTURAL PATTERNS CONSISTS OF NORTHEAST TRENDING OUTCROPS OF THE METAMORPHIC PENDANTS THAT STRIKE PARALLEL TO THE TREND OF THE OUTCROPS AND DIP MODERATELY TO STEEPLY. AT THE EXISTING MAIN PIT, MARBLE OCCURS IN THE NOSE OF AN ANTICLINE WITH THE SCHIST IN THE CORE. THE EXISTING NORTHWEST AND NORTHEAST PIT'S MINE SEPARATE NORTHEAST STRIKING PENDANTS WITH THE BEDDING AND FOLIATION DIPPING NORTHWEST. THE FUTURE PLANNED PIT'S ENLARGE THE EXISTING PIT'S AND MINE THE SOUTHWEST EXTENSION OF THE LIMESTONE/MARBLE PENDANT EXPOSED AT THE MAIN PIT. A GENERALIZED GEOLOGIC MAP PREPARED BY CALPORTLAND (2016) INCLUDES SEVERAL MAPPED FAULTS IN THE EXISTING MAIN PIT.

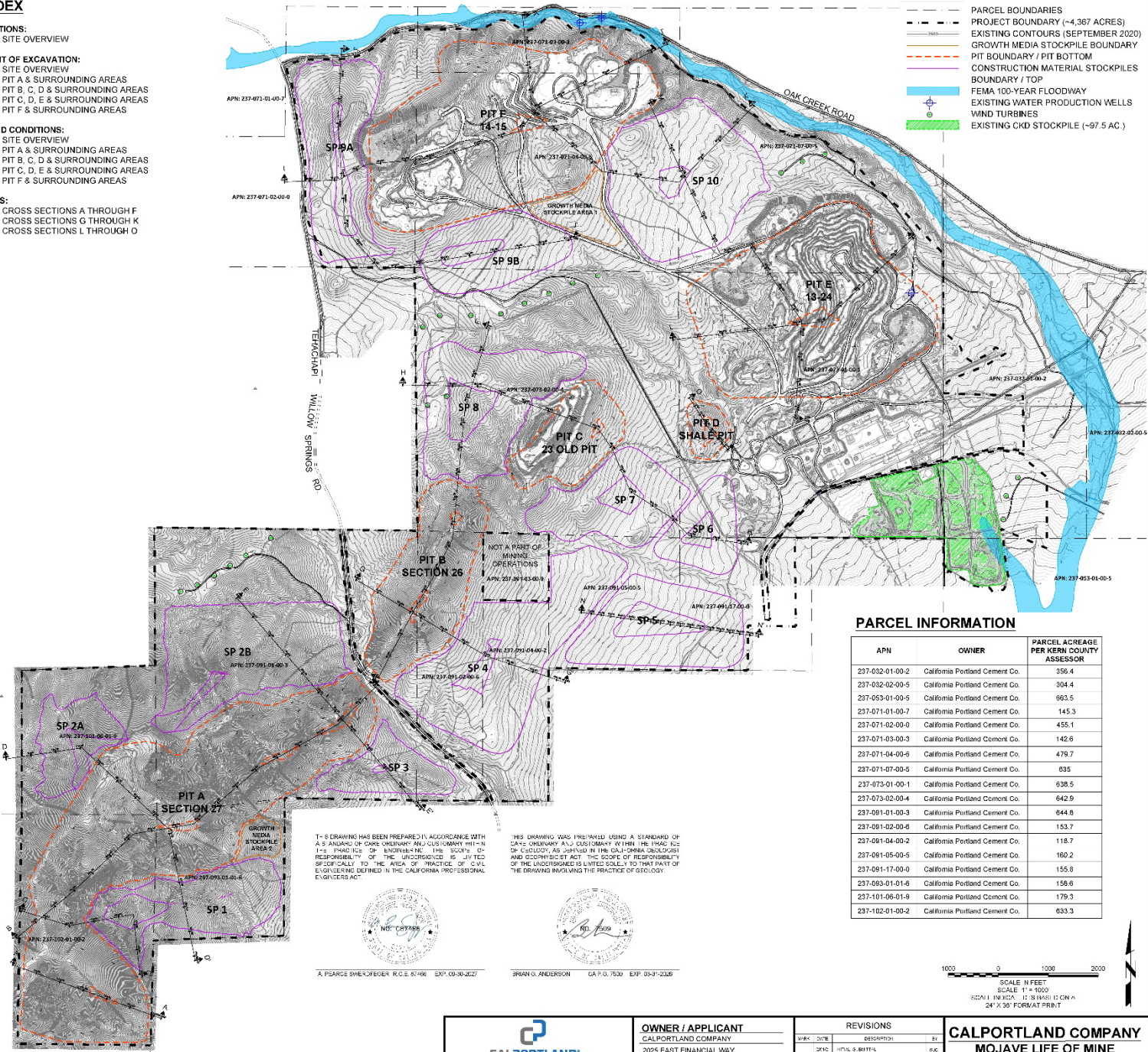
SOURCE: SLOPE STABILITY ASSESSMENT FOR MOJAVE LIFE OF MINE RECLAMATION PLAN AMENDMENT, CALPORTLAND MOJAVE CEMENT PLANT, KERN COUNTY, CALIFORNIA (GOLDER ASSOCIATES INC., OCTOBER 2021).

EXISTING CONDITIONS:
FIGURE 1: SITE OVERVIEW

MAXIMUM EXTENT OF EXCAVATION:
FIGURE 2: SITE OVERVIEW
FIGURE 3: PIT A & SURROUNDING AREAS
FIGURE 4: PIT B, C, D & SURROUNDING AREAS
FIGURE 5: PIT C, D, E & SURROUNDING AREAS
FIGURE 6: PIT F & SURROUNDING AREAS

FINAL RECLAIMED CONDITIONS:
FIGURE 7: SITE OVERVIEW
FIGURE 8: PIT A & SURROUNDING AREAS
FIGURE 9: PIT B, C, D & SURROUNDING AREAS
FIGURE 10: PIT C, D, E & SURROUNDING AREAS
FIGURE 11: PIT F & SURROUNDING AREAS

CROSS SECTIONS:
FIGURE 12: CROSS SECTIONS A THROUGH F
FIGURE 13: CROSS SECTIONS G THROUGH K
FIGURE 14: CROSS SECTIONS L THROUGH O



APN	OWNER	PARCEL ACREAGE PER CENT COUNTY ASSESSOR
237-032-01-09-2	California Portland Cement Co.	356.4
237-032-02-09-5	California Portland Cement Co.	304.4
237-053-01-01-5	California Portland Cement Co.	663.5
237-071-01-07-0	California Portland Cement Co.	145.3
237-071-02-00-0	California Portland Cement Co.	455.1
237-071-03-03-0	California Portland Cement Co.	142.6
237-071-04-04-0	California Portland Cement Co.	479
237-071-07-05-0	California Portland Cement Co.	038.7
237-073-01-01-1	California Portland Cement Co.	038.5
237-073-02-04-0	California Portland Cement Co.	642.9
237-081-01-03-3	California Portland Cement Co.	644.8
237-081-02-06-0	California Portland Cement Co.	153.7
237-091-04-02-0	California Portland Cement Co.	118.7
237-091-05-01-5	California Portland Cement Co.	160.2
237-091-17-00-0	California Portland Cement Co.	155.8
237-093-01-01-6	California Portland Cement Co.	156.6
237-101-06-01-8	California Portland Cement Co.	179.3
237-102-01-02-2	California Portland Cement Co.	633.3

APN	OWNER	PARCEL ACREAGE PER CENT COUNTY ASSESSOR
237-032-01-09-2	California Portland Cement Co.	356.4
237-032-02-09-5	California Portland Cement Co.	304.4
237-053-01-01-5	California Portland Cement Co.	663.5
237-071-01-07-0	California Portland Cement Co.	145.3
237-071-02-00-0	California Portland Cement Co.	455.1
237-071-03-03-0	California Portland Cement Co.	142.6
237-071-04-04-0	California Portland Cement Co.	479
237-071-07-05-0	California Portland Cement Co.	038.7
237-073-01-01-1	California Portland Cement Co.	038.5
237-073-02-04-0	California Portland Cement Co.	642.9
237-081-01-03-3	California Portland Cement Co.	644.8
237-081-02-06-0	California Portland Cement Co.	153.7
237-091-04-02-0	California Portland Cement Co.	118.7
237-091-05-01-5	California Portland Cement Co.	160.2
237-091-17-00-0	California Portland Cement Co.	155.8
237-093-01-01-6	California Portland Cement Co.	156.6
237-101-06-01-8	California Portland Cement Co.	179.3
237-102-01-02-2	California Portland Cement Co.	633.3

A. PEARCE SWERDFOER R.C.E. 87466 EXP. 09-30-2027

BRIAN G. ANDERSON CA P.O. 7500 EXP. 03-31-2020

PROPERTY LINES & TOPOGRAPHY: CPC MOJAVE ALTA / NSPS SURVEY, SMITHCO SURVEYING ENGINEERING
 CONTOUR INTERVAL: SEPTEMBER 2020 (D'ARTAGNAN ALBA, PLS NO. 9052)
 DATUM: 10 FEET MAJOR, 2 FEET MINOR
 HORIZ= NAD27, CALIFORNIA ZONE 5, US FOOT
 VERT= NAVD89



SESPE
CONSULTING, INC.
A Trinity Consultants Company
374 Poli Street, Suite 200 • Ventura, CA 93001
(805) 275-1515 • www.sespeconsulting.com

OWNER / APPLICANT
CALPORTLAND COMPANY
2025 EAST FINANCIAL WAY
GLEN DORA, CALIFORNIA 91741

LAND USE CONSULTANT
SESPE CONSULTING, INC.
374 POLI STREET, SUITE 200
VENTURA, CALIFORNIA 93001
(805) 275-1515

REVISIONS			
MARK	DATE	DESCRIPTION	BY
30-0	01/10/00	INITIAL S-BITTEL	CJC
30-001	01/10/00	REVISION 1	CJC
30-002	01/10/00	REVISION 2	CJC
30-003	01/10/00	REVISION 3	CJC
30-004	01/10/00	REVISION 4	CJC

REVIEWED BY: _____

DATE: _____

CALPORTLAND COMPANY
MOJAVE LIFE OF MINE
RECLAMATION PLAN AMENDMENT

SITE OVERVIEW		FIGURE 1
EXISTING CONDITIONS		
STATE	AS-B-BORN	
VEHICLE	AS-B-BORN	
ENGINEER	G. CAMUS	
PROJECT NAME	AS-B-BORN	

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Table 3-1 Project Assessor Parcel Numbers, Existing General/Specific Plan Map Code, Zoning, and Approximate Acreages

Count	APN	Zone Map	General/Specific Plan	General/Specific Plan Map Code Designation	Existing Zoning	Approximate Acres of APN	Acreage of the Project Site which is within the APN
1.	237-032-01	197	KCGP	7.3, 7.3/2.5	M-3, M-3 WE, A-1, A-1 WE, A-1 FP	356.33	128.77
2.	237-053-01	198	KCGP	7.3, 7.3/2.5	M-3, M-3 FP	663.46	26.31
3.	237-071-02	198	KCGP/CCSP	KCGP: 8.4, 8.4/2.4 CCSP: 8.4/2.4, 8.4/2.6	E(20) RS, NR (20)	455.12	224.06
4.	237-071-03	198	KCGP/CCSP	KCGP: 8.4, 8.4/2.5 CCSP: 8.2/2.5, 8.4/2.4, 8.4/2.6	A-1, NR(20), FPP	142.51	99.24
5.	237-071-04	198	KCGP/CCSP	KCGP: 8.4, 8.4/2.4 CCSP: 8.4/2.4, 8.4/2.6	A-1, NR(20), A WE	479.68	479.68
6.	237-071-07	198	KCGP/CCSP	8.4, 8.4/2.4, 8.4/2.5 CCSP: 8.4/2.6	A-1, A WE	625.46	304.18
7.	237-073-01	198	KCGP	7.3, 7.3/2.4	M-3, M-3 WE	638.28	637.94
8.	237-073-02	198	KCGP	8.4, 8.4/2.4	A-1, A WE	639.65	639.20
9.	237-091-01	198	KCGP	8.2, 8.2/2.4, 8.4, 8.4/2.4	A, A WE	647.44	646.14
10.	237-091-02	198	KCGP	8.4, 8.4/2.4	A, A WE	157.16	157.06
11.	237-091-04	198	KCGP	8.4, 8.4/2.4	A, A WE	118.7	118.57
12.	237-091-05	198	KCGP	8.4	A, A WE	160.21	159.74
13.	237-091-17	198	KCGP	8.4	A WE, A-1, A-1 WE	155.93	115.81
14.	237-093-01	198	KCGP	8.5/2.4	A	156.65	153.99
15.	237-101-06	198	KCGP	8.2/2.4	A	179.29	177.51
16.	237-102-01	198	KCGP	8.5/2.4	A	633.3	285.48

Notes:*Kern County Zoning District:*

A (Exclusive Agriculture)
A WE (Exclusive Agriculture, Wind Energy Combining)
A-1 (Limited Agriculture)
A-1 FP (Limited Agriculture, Floodplain Combining)
A-1 WE (Limited Agriculture, Wind Energy Combining)
M-3 (Heavy Industrial)
M-3 FP (Heavy Industrial, Floodplain Combining)
M-3 WE (Heavy Industrial, Wind Energy Combining)
E(20) RS (Estate – 20 acres, Residential Suburban Combining)
NR(20) (Natural Resource – 20 acres)
FPP (Floodplain Primary)

Kern County General Plan (KCGP) Map Code Designation:

7.3 (Heavy Industrial)
7.3/2.4 (Heavy Industrial - Steep Slope)
7.3/2.5 (Heavy Industrial – Flood Hazard)
8.2 (Resource Reserve)
8.2/2.4 (Resource Reserve – Steep Slope)
8.4 (Mineral and Petroleum)
8.4/2.4 (Mineral and Petroleum – Steep Slope)
8.4/2.5 (Mineral and Petroleum – Flood Hazard)
8.5/2.4 (Resource Management – Steep Slope)

Cameron Canyon Specific Plan (CCSP) Map Code Designation:

8.2/2.5 (Resource Reserve – Flood Hazard)
8.4/2.4 (Mineral and Petroleum – Steep Slope)
8.4/2.6 (Mineral and Petroleum – Erosion Hazard)

Table 3-2, *Proposed Project Site and Surrounding Land Uses*, demonstrates the existing land use of the proposed project site and surrounding areas.

Table 3-2 Proposed Project Site and Surrounding Land Uses

Location	Existing Land Use
Project Site	Industrial (mineral resource extraction, cement manufacturing and shipping), Renewable Energy Generation (wind), Vacant Land. Bisected by Tehachapi Willow Springs Road
North	Oak Creek Road, Renewable Energy Generation (wind), Vacant Land
South	Renewable Energy Generation (wind), Vacant Land
East	Renewable Energy Generation (wind and solar), Vacant Land
West	Renewable Energy Generation (wind), Vacant Land

Existing Conditions

The proposed project site is located in the Mojave Desert on the southeastern edge of the Tehachapi Mountains. The elevation of the project area ranges from approximately 3,420 to 6,085 feet above mean sea level (amsl). Oak Creek Road runs east-west along the project site's northern boundary. Tehachapi Willow Springs Road runs north-south along a portion of the northern portion of the project site's western boundary and bisects the southwestern portion of the project site.

The surrounding land uses consist of open space, dispersed rural residences, renewable energy generation (i.e., wind turbines and solar facilities), and other mining and industrial uses. Sensitive receptors located in the vicinity of the project site consist of rural residential dwellings located at varying distances from the proposed project site. The nearest identified sensitive receptors are a residence located 5,400 feet south of the project site west of Tehachapi Willow Springs Road, a residence located approximately 5,500 feet northwest of the project site adjacent to Tehachapi Willow Springs Road, a residence located approximately 6,450 feet north of the project site adjacent to Cameron Canyon Road, and residence/commercial facility located approximately 7,400 feet south of the project site west of Tehachapi Willow Springs Road. The Pacific Crest Trail at its nearest point is approximately 600 feet northwest of the northwest corner of the project site near the Tehachapi Willow Springs Road / Oak Creek Road intersection.

An approximately 40-acre parcel of land under federal ownership administered by the U.S. Bureau of Land Management (BLM) is located centrally within the exterior boundaries of the project site, however it is not part of the project site. Nothing about the BLM access rights to their aforementioned parcel (the northeast quarter of the northwest quarter of Township 11 North, Range 14 West (T11N, R14W), San Bernardino Base and Meridian (SBB&M)) will be changed because of the proposed project.

The project proponent acquired the majority of the project site properties in 1953 and commenced surface mining operations and cement production in 1954. Mining and cement plant operations have been ongoing since that time. Approximately 852 acres of the site have been disturbed by previous and ongoing site operations and other disturbances associated with dirt roads, wind turbine development, and areas impacted by wildfire in 2006 and 2011. A total of 22 wind turbines are located on the project site. Of those 22 wind turbines, cement plant operations utilize eight (8) 3-megawatt (MW) onsite wind turbines owned by the project

proponent comprising a 24-MW wind turbine electrical generation facility (the northernmost eight turbines in Section 23, Township 11 North, Range 14 West (T11N, R14W), San Bernardino Base and Meridian (SBB&M)). The remaining fourteen (14) onsite wind turbines supply energy exclusively to the electrical grid. Additional wind turbines are also located offsite in the surrounding area.

The project site varies in topography, containing steep ridgelines, rocky hillsides, desert scrubland, rolling hills, and desert washes. Project site terrain west of Tehachapi Willow Springs Road includes a mountainous ridgeline transitioning into a lower ridgeline running generally from the northeast corner near the existing mined areas to the southwest. Rolling hills and valleys occur on either side of this portion of the ridgeline.

Much of the site is composed of alluvial deposits and contains coarse-textured, well-drained soils developing from alluvium. Soil series which occur within the site include Cajon loamy sand, Cajon gravelly loamy sand, Cinco gravelly loamy sand, Garlock loamy sand, and Randsburg sandy loam.

The diverse terrain of steep ridgelines, rocky hillsides, rolling hills, and flat desert scrubland supports a variety of habitats utilized by a diverse group of wildlife species. Most of the area consists of moderately steep to very steep ridgelines with rolling hills at the base of the mountainous terrain which support juniper woodlands and mixed woody scrub vegetation. Four plant communities identified within the project site consist of approximately 1,218 acres of Mojave Juniper Woodland and Scrub covering the majority of the foothills and slopes, approximately 920 acres of Mojave Mixed Woody Scrub occurring primarily at lower elevations in the flatter areas of the site, approximately 145 acres of Joshua Tree Woodland most of which is within the northern portion of the project site, and Riparian habitat. Fifteen ephemeral drainage channels have been delineated within the project site, composing a total of approximately 3.51 acres, some of which support riparian habitat.

The project site is located within the Willow Springs Hydrologic Area of the Antelope Hydrologic Unit. The project area has no perennial streams or bodies of water; and contains several seasonal/intermittent drainages. Oak Creek is an intermittent stream with a drainage course that flows around the north and easternmost sides of the project site and then southeast towards the Antelope Valley. Major drainage in the project area is primarily to the southeast toward the Oak Creek drainage. An unnamed wash crosses the central portion of the project site, running subparallel to Tehachapi-Willow Springs Road and flowing to the southeast. Runoff on the northernmost side of the project area is via a series of gullies or channels, which direct surface flows to the Oak Creek channel that runs adjacent to the northern border of the site, along Oak Creek Road. Runoff from the eastern half of the project site generally flows south and east; ephemeral drainages direct flows to Oak Creek, east of the site. Runoff from the majority of the western half of the project site flows south and east to an unnamed ephemeral channel that runs adjacent to Tehachapi-Willow Springs Road. The confluence of the unnamed channel and Oak Creek is approximately 5 miles southeast of the project site. An approximately 4.7-acre area within the southeastern portion of the project site encroaches into the 100-year floodplain as mapped on Federal Emergency Management Agency (FEMA) FIRM Panel 06029C3275E (effective September 26, 2008). The project site is located primarily in Zone X, “[a]reas determined to be outside the 0.2% annual chance floodplain.” The northernmost edge of the

project site, in close proximity to Oak Creek, is located immediately adjacent to area mapped as Zone A, “[a]rea subject to 1% annual chance flood; no Base Flood Elevations determined” (Sespe, 2025g).

None of the project site parcels are designated by the California Department of Conservation (DOC) as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Additionally, none of the project site parcels are subjected to a Williamson Act Land Use contract or within an Agriculture Preserve boundary. Based on a review of records maintained by the California Department of Conservation/Geologic Energy Management Division (CalGEM), there are no oil wells identified within the project site.

The proposed project site contains areas classified as MRZ-2a for limestone resources by the California Geological Survey (CGS) under the SMARA mineral land classification program (CGS Open-File Report 99-15, Plate 8 of 25 – Limestone, Monolith Quadrangle).

The nearest airports to the project site are Mountain Valley Airport approximately 4.75 miles to the northwest, Tehachapi Municipal Airport approximately 7.25 miles to the northwest, and Mojave Airport, approximately 7.5 miles to the east. Review of the Kern County Airport Land Use Compatibility Plan (ALUCP) concludes that the project site is not located within the sphere of influence of any airport as identified by the ALUCP.

CEQA Baseline Conditions

California authorities provide that while the existing physical conditions at the time of environmental review normally constitute the baseline, the key consideration in selecting a baseline is whether the chosen baseline provides an accurate picture of the project’s impacts. [14 Cal. Code Regs., § 15125(a)(1); *Neighbors for Smart Rail v. Exposition Metro Line Constr. Auth.* (2013) 57 Cal.4th 439, 447.] Thus, courts have endorsed various other baselines as proper, including a baseline that averages past operations as well as a baseline constituting future conditions, so long as they are not misleading or without informational value. [See e.g., *Neighbors for Smart Rail*, supra, at 445; *Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 328; *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 650.]

CalPortland’s mining activities at the Mojave Mine are allowed as-of-right as vested mining rights. Thus, the project CEQA analyses must evaluate the project against an environmental setting baseline that recognizes the ongoing and continuous mining, processing, reclamation, and cement production operations at the vested Mojave Mine.

3.3 Surface Mining and Reclamation Act Process

SMARA (California Public Resources Code [PRC] Sections 2710–2796) provides a comprehensive surface mining and reclamation policy for the regulation of surface mining operations in California. In enacting SMARA, the Legislature found that “extraction of minerals is essential to the continued economic well-being of the state and to the needs of society, and that the reclamation of mined lands is necessary to prevent or minimize adverse effects on the environment and to protect the public health and safety.” (PRC § 2711(a). SMARA also

encourages the production, conservation, and protection of the State's mineral resources. PRC Section 2207 provides annual reporting requirements for all mines in the State, under which the State Mining and Geology Board (SMGB) is also granted authority and obligations. SMARA requires the SMGB to adopt policies for the reclamation of mined lands and the conservation of mineral resources. Regulations promulgated by SMGB expound on the requirements of SMARA and can be found in Title 14, Division 2, Chapter 8, Subchapter 1 of the California Code of Regulations (CCR).

City and County SMARA Lead Agencies must adopt ordinances for land use permitting and reclamation procedures that comply with SMARA. The Kern County Zoning Ordinance (Chapter 19.100) contains regulations regarding Surface Mining Operations. Combined, the SMARA, SMGB regulations, and Kern County Zoning Ordinance provide the regulatory framework for surface mining and reclamation activities in Kern County.

SMARA Lead Agencies review applications for surface mining and/or reclamation plans (or amendments thereto), submit such applications and financial assurances to the California Department of Conservation (CDOC)/ Division of Mine Reclamation (DMR) for technical review and comment prior to approval, annually review financial assurances, annually inspect mining and reclamation operations for compliance, and take enforcement actions where necessary. In addition, each mining and reclamation operation is required to maintain a current financial assurance mechanism (FAM) with Kern County in an amount sufficient to cover the cost of reclamation. The amount of the financial assurance is calculated per guidelines provided by the DMR and as necessary updated annually to account for the extent of active mine operations, areas of disturbance, and reclamation progress. If Kern County determines the mine operator has abandoned or is financially incapable of completing site reclamation, Kern County can seek forfeiture of the FAM and utilize it to implement reclamation of the mine site. The proposed project is subject to the SMARA, SMGB regulations, and Kern County Zoning Ordinance.

Legal Nonconforming Vested Use

Operation of the existing limestone and construction materials mining, processing, and cement production facility commenced in 1954 before the enactment of applicable Kern County use permit requirements and prior to enactment of SMARA in 1975. In accordance with SMARA, the County approved a reclamation plan for the facility in 1979 which prescribes reclamation requirements covering approximately 1,542 acres of lands within CalPortland properties including mined areas and areas associated with the cement plant. At that time, the County recognized that operations commenced prior to County zoning restrictions in the area, and the portion of the operation covered by the 1979 reclamation plan was a legal nonconforming use. On March 15, 2021, the County determined that mining and processing activities are a legal nonconforming (vested) uses on approximately 6,658 acres of land owned by the project proponent, inclusive of the 1,542 acres covered by the 1979 reclamation plan.

Because the mining and processing operations are legal nonconforming (vested) uses within the approximately 6,658-acre vested area, a discretionary conditional use permit is not required to continue recovery of the minerals themselves, or to continue operation of the mineral processing or cement production facilities. Therefore, the proposed project is the County's review and

approval of a reclamation plan amendment for the approximately 4,367 acres of the vested facility encompassing existing and continued future mining and cement production operations. The proposed project would provide for reclamation of areas of existing and continued mining and would provide for reclamation of the existing cement plant and related components upon the future cessation of mining and cement plant operation.

The proposed project would not involve changes to the existing vested operations, production levels, mining systems or processes, or throughput of the cement plant. Proposed reclamation activities and reclaimed site conditions would be achieved following the cessation of continued mining and cement plant operations. The project proponent anticipates that mining at the site will be completed in approximately the year 2222, and that final reclamation activities would require approximately two years for completion in the year 2224, followed by approximately three additional years of revegetation monitoring, with final site reclamation completed in the year 2227.

Thus, vested and continuing mining activities such as drilling, blasting, material recovery, material movement (with the exception of material movement pertaining to reclamation, e.g. redistribution of stockpiled growth media to aid in revegetation efforts), processing, cement production, and material transport for sale are not subject to discretionary approval by the County and are not part of the proposed project. Rather, the proposed project consists of reclamation activities within the approximately 4,367-acre project site such as recontouring, stabilizing, revegetation, and monitoring of final slopes and disturbed mining areas; reclamation of roads and ancillary equipment and facilities; and removal of the processing and cement plant facilities. Although some reclamation activities are and would continue to be performed concurrent with ongoing mining and processing, reclamation activities for final site reclamation would occur after the completion of mining and processing operations.

3.4 Project Characteristics

3.4.1 Project Summary

As discussed in more detail in the following sections, the project proponent is requesting the following discretionary action from Kern County:

- (a) approval of CUP No. 21, Map 197 and CUP No. 46, Map 198 authorizing a reclamation plan amendment for the Mojave Mine that would supersede the existing 1979 reclamation plan and would provide for reclamation of up to 4,367 acres of mined vested lands in accordance with the Surface Mining and Reclamation Act of 1975 (SMARA).¹

The project proponent proposes to continue to develop its limestone and construction materials resources within the existing vested properties necessary to meet and maintain the market quality and quantity requirements by utilizing additional material reserves to continue cement and construction materials production. Reclamation of continued operations requires the County's approval of the proposed project which would amend the existing 1979 reclamation plan through

¹ The County uses CUPs as the vehicle for reclamation plan approvals, including vested sites that do not require discretionary conditional use permits.

approval of a reclamation plan applicable to approximately 4,367 acres of the vested properties. The approximately 4,367 acres of the proposed project is inclusive of most of the 1,542 acres currently subject to the 1979 reclamation plan. An increase of approximately 2,825 acres would bring the reclamation plan boundary through the proposed amendment to a total of approximately 4,367 acres. Approximately 2,291 acres of the vested properties would not be encompassed by the proposed reclamation plan amendment, as such acreage has not and is not currently proposed to be subjected to surface disturbance in conjunction with mining activities. The proposed reclamation plan covers existing and continued mining areas, storage areas, overburden/interburden placement areas, material processing and cement manufacturing areas. Although the proposed project involves the County's approval of a reclamation plan amendment, the ongoing and continued site operations are relevant for establishing baseline conditions associated with the County's analysis of the proposed project. Thus, existing and continued operations at the project site are discussed herein.

The proposed project would not involve changes to the existing vested mining operations including, for example, production levels, mining systems or processes, and ultimate throughput from the cement plant. The project proponent anticipates that operations will continue at the same production levels as currently exist following approval of the proposed project, subject to market demand.

Mining would continue within the vested properties consistent with the proposed reclamation plan. Mining is planned to result in six mine pits (designated Pit A through Pit F), two of which (Pits E and F) would be backfilled as part of the mining process. Mining would also result in the development of twelve construction material and interburden/overburden stockpiles within the reclamation plan boundary that would remain following reclamation, as identified and labeled on the attached **Figure 3-8, Proposed Final Reclaimed Conditions**. Additionally, two growth media stockpiles would also be developed during mining using material salvaged during mining and temporarily stored for distribution to aid in revegetation efforts during reclamation.

As with existing operations, continued activities could involve certain concurrent reclamation-related activities; however, the majority of site reclamation as prescribed in the proposed project's reclamation plan would occur once mining is completed. The project proponent anticipates mining for approximately 200 years (concluding in the year 2222) after which final reclamation would commence.

The amount of mined material and cement production associated with the existing operation fluctuates annually based on market demand and other factors. Annual extraction and production rates during the 5-year period 2016 to 2020 are shown in **Table 3-3, Mojave Mine Production (2016 – 2020)**. Annual limestone production has been as high as 2.3 million tons (year 2005) and cement production as high as more than 1.6 million tons (year 2018). Data submitted by the project proponent indicates that when accounting for removal of topsoil and overburden and the removal of fines during processing, operations have handled in excess of approximately 6 million tons of material in a single year.

Table 3-3 Mojave Mine Production (2016 – 2020)

Year	Limestone (tons)	Overburden and Construction Material (tons)	Cement Production (tons)
2016	1,685,692	2,119,885	1,328,776
2017	2,012,005	2,553,149	1,589,630
2018	1,954,089	2,754,684	1,612,637
2019	1,994,127	2,106,646	1,475,620
2020	2,012,741	1,497,759	1,593,146
Annual Average for 5-Year Period	1,931,731	2,206,425	1,519,962

Source: Table 5-3, Baseline Mine Production, of "Mojave Life of Mine Reclamation Plan Amendment Project Description" (Sespe Consulting 2023)

Upon cessation of mining activities, the proposed reclamation plan provides for most of the disturbed acreage within the reclamation plan boundary to be reclaimed and revegetated with native species and reclaimed to open space. Proposed reclamation includes recontouring, stabilizing, revegetation, and monitoring of most final slopes and disturbed mining and stockpile areas (but would not include revegetation of areas such as benches/pit highwalls, portions of pit highwalls and pit bottoms inundated by water, as described in the reclamation plan); reclamation of roads not required for post-reclamation access and security; removal of ancillary equipment and facilities; and removal of the processing plant and cement plant and all cement plant related facilities. The proposed reclamation plan does not include removal of any rail facilities outside the reclamation plan boundary, nor the removal of any wind turbines. The proposed reclamation plan provides a detailed discussion of the anticipated mining and proposed reclamation for the site. **Figure 3-8, *Proposed Final Reclaimed Conditions***, provides a bird's-eye-view illustration of the reclaimed site conditions. **Figure 3-9, *Proposed Reclamation Cross-Sections (A-F)***, **Figure 3-10, *Proposed Reclamation Cross-Sections (G-K)***, and **Figure 3-11, *Proposed Reclamation Cross-Sections (L-O)***, provide cross-section illustrations of reclaimed site conditions. **Figure 3-7, *Proposed Maximum Extent of Excavation***, illustrates proposed maximum extent of pit excavation, and final stockpile configuration.

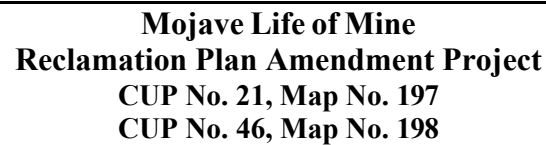
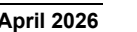


Figure 3-7
Proposed Maximum Extent of Excavation
CalPortland Company
by SESPE Consulting, Inc.



**Kern County
Planning & Natural
Resources Department**



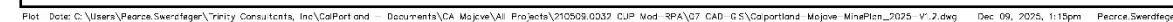
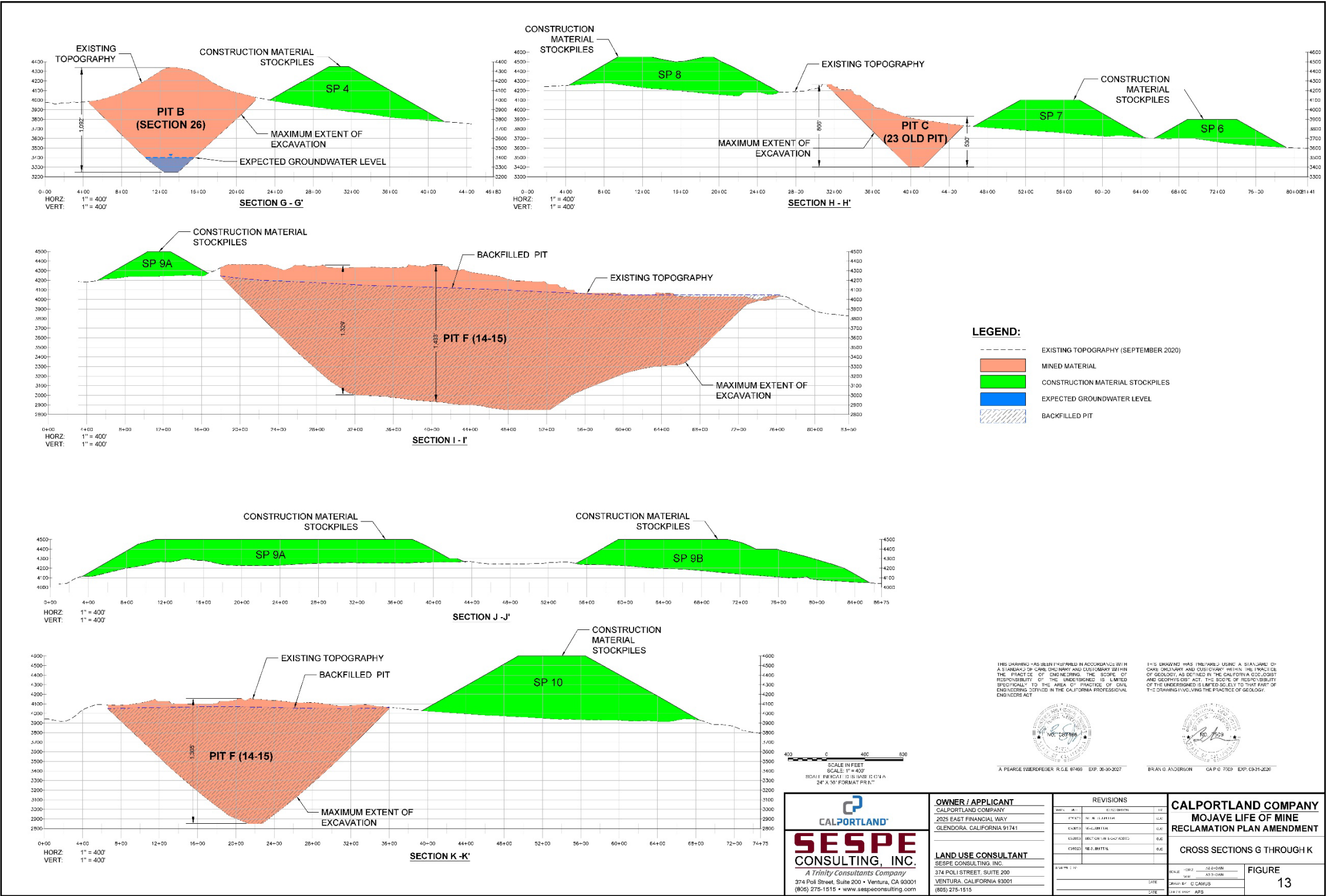


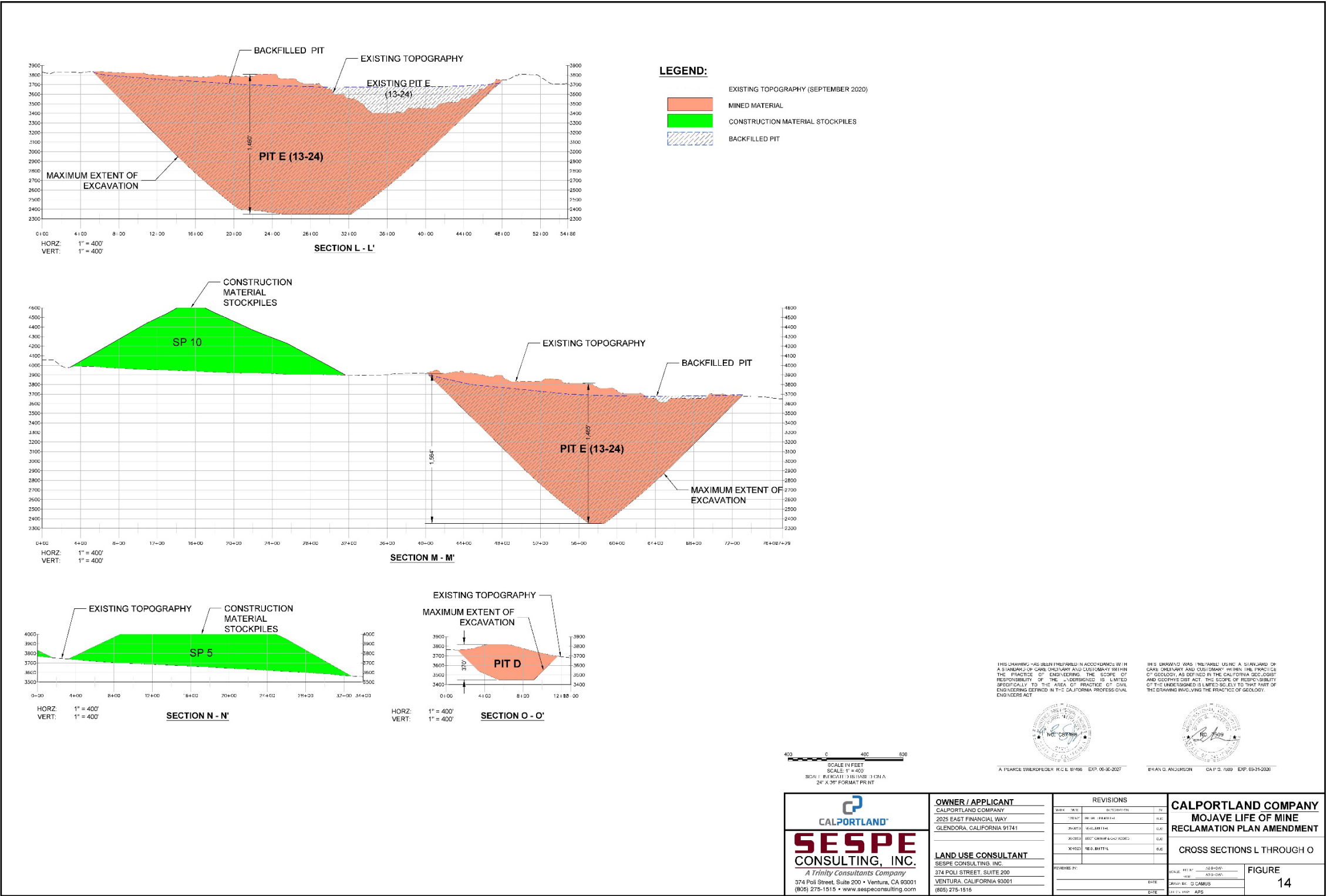
FIGURE	12
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**Mojave Life of Mine
Reclamation Plan Amendment Project
CUP No. 21, Map No. 197
CUP No. 46, Map No. 198**

**Figure 3-10
Proposed Reclamation Cross-Sections (G-K)**
**CalPortland Company
by SESPE Consulting, Inc.**





Mojave Life of Mine
Reclamation Plan Amendment Project
CUP No. 21, Map No. 197
CUP No. 46, Map No. 198

Figure 3-11
Proposed Reclamation Cross-Sections (L-O)
CalPortland Company
by SESPE Consulting, Inc.



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Final reclaimed slopes for mine pits A through D would range from 37.5 degrees (1.305H:1V) to 45 degrees (1H:1V) varying based on slope height, underlying material, and other factors as determined through a slope stability analysis presented with the proposed reclamation plan and are designed to achieve factors of safety at, or in excess of, 1.5 under static conditions and 1.1 under pseudo-static conditions. Mine pits E and F are planned to be backfilled as part of mining operations as shown on **Figure 3-8, *Proposed Final Reclaimed Conditions***; thus, nominal slopes would remain for these pits at final reclamation.

The twelve permanent stockpiles are planned to have overall slope inclinations of 1.75H:1V (29.7 degrees). Slope stability analysis of the stockpiles determined that proposed final overburden stockpile fill slopes would achieve factors of safety at, or in excess of, 1.7 under static conditions and 1.1 under pseudo-static conditions with overall slopes no steeper than 1.75H:1V, overall heights of 830 ft or less, and with tops of stockpiles near horizontal and with a minimum 50-foot offset between the toe of slope and crest of any adjacent pit.

The existing operation is staffed twenty-four hours a day, seven days a week. Temporary lighting is used for the nighttime operations, as needed, and the remaining facilities are sufficiently illuminated so that any event may be observed during hours of darkness. Reclamation activities would occur primarily during daylight hours. However, there is a potential that some reclamation activities may occur during dusk or nighttime hours. Although not anticipated, if outdoor reclamation activities occur during the time of year when daylight hours are shorter, or during any nighttime hours, some lighting may be required to provide a safe working environment. If nighttime lighting is utilized, it shall comply with Section 19.81 (Outdoor Lighting – Dark Skies) of the *Kern County Zoning Ordinance*. The existing operation maintains approximately 21 employees and typically has 16 employees within the vested mine site at a time. The project proponent estimates that maximum reclamation operations would result in an additional 24 employees for reclamation activities (hydroseeding, slope preparation/grading, monitoring, demolition, and salvage). The demolition crew would demolish the stationary human-made items onsite required to be removed by the Reclamation Plan, then the Salvage Crew would sort the material comprising those items (as well as other human-made items onsite not requiring demolition, such as unused wire and pipe) into two categories (waste and recyclables) and transport the material to appropriately permitted facilities for disposal/recycling as applicable.

Public access to the site would be restricted with perimeter fencing, locked gates, and boulders, as needed. As needed, the gates would have signs reading, "No Trespassing." Perimeter fencing and gates may be installed to restrict access to foot traffic and motor vehicles from the public roads, and would remain in place during mining and reclamation activities as needed.

Table 3-4, *Summary Comparison of Existing and Proposed Reclamation*, provides a summary comparison of the existing approved reclamation plan and proposed changes under the proposed project.

Table 3-4 Summary Comparison of Existing and Proposed Reclamation

Component	Existing	Proposed Project
Mineral Production (vested)	Limestone and construction materials.	No change.
Annual Average Limestone Production for 5-year period 2016-2020	1,931,731 tons (fluctuates per market demand)	No change.
Annual Average Overburden Production for 5-year period 2016-2020	2,206,425 tons (fluctuates per market demand)	No change.
Annual Average Total Mine Production for 5-year period 2016-2020 (sum of above)	4,138,156 tons (fluctuates per market demand)	No change.
Cement Plant Production (annual average for 5-year period 2016-2020)	1,519,692 tons (fluctuates per market demand)	No change.
Mining Pits/Stockpile Areas	Unrestricted	Approximately 2,650 acres
Maximum Disturbed Area to be Reclaimed	Up to approximately 1,542 acres	Up to approximately 4,367 acres (includes above)
Total Reclamation Plan Area	Approximately 1,542 acres	Approximately 4,367 acres (includes above)
Mining Phases	Single phase	No change.
Mining Method	Drilling and blasting benches. Material is then loosened by an excavator and dozer and loaded onto haul trucks for transport to the processing and cement production facilities.	No change.
Anticipated Approximate Mining Depth (feet below ground surface [bgs]; elevation above mean sea level [amsl] and maximum slope height)	390 to 690 ft bgs	Pit A: 1,223 ft bgs; 3,650 ft amsl; max. slope height: 1,650 ft Pit B: 1,090 ft bgs; 3,250 ft amsl; max. slope height: 825 ft Pit C: 530 ft bgs; 3,400 ft amsl; max. slope height: 875 ft Pit D: 370 feet bgs; 3,450 feet amsl; max. slope height: 310 ft Pit E: 1,465 ft bgs; 2,350 ft amsl; max. slope height: 1,600 ft * Pit F: 1,433 ft bgs; 2,850 ft amsl; max. slope height: 1,300 ft * <i>*Pits E and F are planned to be backfilled as part of mining operations, resulting in final elevations of less than 100 ft bgs.</i>
Anticipated Maximum Height of Permanent Stockpiles (feet above ground surface and elevation above mean sea level [amsl])	Unrestricted	Pile 1: 450 ft; 4,790 ft amsl Pile 2B: 830 ft; 4,950 ft amsl Pile 2A: 500 ft; 5,200 ft amsl Pile 3: 370 ft; 4,200 ft amsl

Table 3-4 Summary Comparison of Existing and Proposed Reclamation

Component	Existing	Proposed Project
		Pile 4: 570 ft; 4,350 ft amsl Pile 5: 440 ft; 4,000 ft amsl Pile 6: 290 ft; 3,900 ft amsl Pile 7: 400 ft; 4,100 ft amsl Pile 8: 500 ft; 4,550 ft amsl Pile 9A: 450 ft; 4,500 ft amsl Pile 9B: 420 ft; 4,500 ft amsl Pile 10: 730 ft; 4,600 ft amsl
Final Slopes	1H:1V (horizontal to vertical). In areas where the natural slope is flatter than 1H:1V, the outermost 20-feet of excavation shall be finished to a 2H:1V slope or to the natural slope, whichever is flatter. Overburden/interburden piles shall have an angle of natural repose of 35 to 37 degrees. Cement Kiln Dust (CKD) tailings shall be established at a maximum 3:1 slope.	Final Stockpiles: 1.75H:1V with 15-foot benches at 50-foot vertical intervals. Final Pit Slopes: Each final slope has its own slope angles and factor of safety as analyzed in the Slope Stability Assessment as necessary to achieve factors of safety at or in excess of 1.5 static and 1.1 pseudo-static.
Estimated Life of Operations and Mining Termination Date	50 years from 1979 reclamation plan approval; at least until the year 2028.	200 years from present, completed in approximately year 2222.
Estimated Reclamation Completion Date	Unspecified.	2224 (approximately two years from termination of mining)
Estimated Monitoring Completion Date	Unspecified.	Year 2227 (approximately five years from termination of mining)
Revegetation	No planned resoiling or revegetation of mined areas in anticipation of natural propagation. If within 3-5 years natural propagation has not achieved vegetation similar to surrounding areas, areas will be reseeded with native and/or exotic grasses. Tree screens to be planted around waste kiln material dumps.	Restore native creosote bush scrub plant community. Seeds distributed by imprinting, or hand cast as needed, during the rainy season (October 1 through January 30). No permanent irrigation is proposed as part of final reclamation. Recontour planting areas (if needed), control of invasive weeds, placement of topsoil and subsoil, install temporary irrigation systems (if needed), install erosion control devices, planting/seeding, maintenance, monitoring, and reporting pursuant to revegetation plan.

Table 3-4 Summary Comparison of Existing and Proposed Reclamation

Component	Existing	Proposed Project
Vehicular Access (mining and reclamation)	Access road connecting with Oak Creek Road	Access road connecting with Oak Creek Road for portion of project site east of Tehachapi Willow Springs Road. Access from Tehachapi Willow Springs Road for areas to the west of Tehachapi Willow Springs Road.
End Use	Efforts anticipated to be directed toward availability for heavy manufacturing in disturbed areas and recreational uses in the undisturbed areas.	Open Space

3.4.2 Mining and Operations

As with existing operations, continued mining will continue to involve drilling and blasting, developing mine pits with benched slopes. The geologic conditions within the project site include limestone, shale, granite, clay, dolomite, sandy clays and high alumina materials, all of which are required in the portland cement manufacturing process. The manufacture of portland cement requires the processing of all raw materials mined in various chemical combinations, and continued mining will allow for access of various materials among the six planned mine pits. Therefore, mining may be performed at various times in one or any combination of each of the planned mine pits throughout the life of mine. **Table 3-5, *Continued Surface Disturbance and Estimated Limestone/Ore and Overburden Production***, lists the surface area, reserves, overburden quantities, annual production range, and proposed duration of operations.

Table 3-5 Continued Surface Disturbance and Estimated Limestone/Ore and Overburden Production

Component	Quantity
Proposed Reclamation Plan Amendment total acreage	Approximately 4,367 acres
Anticipated Total Pit Boundary Area, i.e. the sum of the pit boundary area of the six proposed pits, Pit A through Pit F (included in total reclamation plan acreage)	Pit A: 467 acres Pit B: 126 acres Pit C: 66 acres Pit D: 17 acres Pit E: 313 acres Pit F: 345 acres Total: 1,334 acres
Anticipated Total Stockpile Boundary Area, i.e., the sum of the stockpile boundary area of the proposed stockpiles (included in the total reclamation plan acreage)	Stockpile 1: 99 acres Stockpile 2A: 52 acres Stockpile 2B: 157 acres Stockpile 3: 47 acres Stockpile 4: 180 acres Stockpile 5: 111 acres Stockpile 6: 49 acres

Table 3-5 Continued Surface Disturbance and Estimated Limestone/Ore and Overburden Production

Component	Quantity
	Stockpile 7: 87 acres Stockpile 8: 131 acres Stockpile 9A: 115 acres Stockpile 9B: 82 acres Stockpile 10: 165 acres Total: 1,275 acres
Estimated Maximum Total Commodity Production (life of mine)	1.009 billion tons
Estimated Limestone Excavated ¹ (200 years)	386 million tons
Estimated Limestone Excavated (annual average)	1.93 million tons per year
Estimated Overburden ¹ (200 years)	382 million tons
Estimated Overburden (annual)	1.91 million tons per year
Anticipate Reclamation Term	200 years

Source: Table 2-2 of "Mojave Life of Mine Reclamation Plan Amendment" (Sespe Consulting 2026)

Notes:

1. Ore (limestone) and overburden quantities do not include past production.

Quarry Operations

The estimated surface mining area of the pits is approximately 1,334 acres of the total 6,658-acre vested area. The six mine pits would be mined to a maximum depth of approximately 310 feet below ground surface (bgs) (Pit D) to 1,465 feet bgs (Pit E) (planned depths of each mine pit are listed in **Table 3-4, Summary Comparison of Existing and Proposed Reclamation**, above).

Mine pits would be excavated utilizing conventional open pit methods and would involve drilling and blasting benches. Final pit slope design is informed with slope stability analysis prepared for the mine plan and considers achievable bench designs, inter-ramp slopes, and overall slopes. The analysis identified maximum slope angles for various overall pit slope heights to achieve the target factor of safety (FOS) at the cessation of mining (i.e., closure conditions). Maximum slope angles are specific to each pit based on the results of the site-specific seismic hazard analysis. Slope design requirements for Pits A, B, C, and D are based on the highest peak ground acceleration (PGA) for the cumulative area. Pits E and F are planned to be backfilled to near surface grade during mining operations, therefore, slope stability analysis for final slopes of these pits is not applicable to final reclaimed conditions. **Table 3-6, Mine Pits A through D Planned Final Slope Design Angles**, presents the recommendations of the slope stability analysis.

Table 3-6 Mine Pits A through D Planned Final Slope Design Angles

Slope Height	Maximum Slope Angle	Factor of Safety (static)	Factor of Safety (seismic)
1,500 – 1,675 feet	37.5°	1.56	1.10
1,400 – 1,500 feet	39°	1.56	1.11
1,300 – 1,400 feet	40°	1.56	1.11

Table 3-6 Mine Pits A through D Planned Final Slope Design Angles

Slope Height	Maximum Slope Angle	Factor of Safety (static)	Factor of Safety (seismic)
1,200 – 1,300 feet	41.5°	1.54	1.10
1,100 – 1,200 feet	42.5°	1.54	1.11
1,000 – 1,100 feet	44°	1.53	1.10
0 – 1,000 feet	45°	1.54	1.11

Source: Table – Pit Slope Design Angles. Application for Surface Mining Permit and Reclamation Plan (Form 520) for CalPortland Company – Mojave Mine (Project), CA Mine ID #91-15-0032.

Due to the nature of the reserve deposit, blasting is necessary and conducted for existing mining operations. As with existing operations, blasting will continue, typically twice per day during daylight hours, for 4 to 6 days per week. Explosives are currently stored within the project site and there are currently no proposed changes to the existing onsite explosives storage facilities. Blasting and explosives storage at the current locations and any potential future locations will continue to be done in accordance with all local, state, and federal requirements.

Blasting operations involve drilling along the mining face, placement, and detonation of charges by a blaster licensed through the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) for handling explosive materials. The transporting, handling, storage, and use of explosive materials, blasting agents, and blasting equipment will continue to be supervised by a qualified and licensed blasting contractor. The blasting contractor and the explosive delivery company are and will continue to be properly trained and licensed in accordance with all Federal, State, and local regulations and would provide evidence of compliance with the California blasting license program, U.S. Department of Transportation hazardous materials (HAZMAT) Certificate of Registration, California HAZMAT Transportation License, and general liability insurance for explosive transportation. Drilling is and will continue to be conducted as part of mining operations approximately 365 days/year, up to 7 days a week, 24 hours/day with depths of 60 feet. Blasting is and will continue to be conducted as part of mining operations; typically, two times per day during daylight hours, 4 to 6 days per week.

Excavated material is and will continue to be crushed prior to being transported via truck or conveyor to the existing onsite processing and cement plant facilities. A portable crusher is and will continue to be typically utilized in the quarry site as needed to produce construction materials during daylight hours, up to 10 hours per day and up to 7 days per week. Hauling of materials between mine pits and the processing plant, cement plant or overburden stockpiles is and will continue to be undertaken daily at any time day or night throughout a 24-hour period.

Existing and continued operations will continue to utilize approximately 21 employees and typically have 16 employees within the vested mine site at a given time. The operation is staffed 24 hours a day, 7 days a week. Although not a part of the proposed project, additional employees are employed within the boundaries of the vested mine site (i.e. at the cement plant and adjacent office building); consisting of approximately 150 such employees, of which there are typically

100 such employees onsite at a given time. During times of maintenance there can be up to 300 personnel on site, including contractors.

Overburden and Topsoil Management

Mined overburden includes decomposed granite, shale, and limestone materials of insufficient quality for cement production. Overburden materials extracted during mining are generally planned to be stockpiled adjacent to mine pits as shown on **Figure 3-8, Proposed Final Reclaimed Conditions**. Additionally, overburden is planned to be placed in mine pits E and F as permanent backfill as excavated during planned mining of mine pits A, B, C, and D.

During continued mining, suitable growth media (also referred to as topsoil) will be salvaged and stockpiled separately from overburden stockpiles, and is planned to be retained in two growth media stockpiles as shown on **Figure 3-7, Proposed Maximum Extent of Excavation**. Growth media stockpiles are planned to be completely removed during final reclamation activities at the site as the growth media in these stockpiles would be used in reclamation of the disturbed areas of the site. Growth media stockpiles would have maximum slopes of 2:1 (horizontal:vertical).

Mobile Equipment and Vehicles

Existing operations utilize portable off-road equipment for daily mineral resource recovery operations. Equipment is repaired or replaced as needed. **Table 3-7, Equipment Usage for Ongoing Operations**, lists the equipment used for onsite excavation, processing, and transporting of materials and personnel within the site. **Table 3-8, Project Daily and Annual Trip Generation Summary**, lists offsite vehicle trips and average daily trips associated with reclamation. Haul trucks and diesel equipment are required to comply with all applicable requirements of the California Air Resources Board's (CARB) off-road diesel vehicles regulation to reduce diesel pollutants.

Table 3-7 Equipment and Usage for Ongoing Operations

Equipment ¹	Typical Number	Purpose
Komatsu WA900 loader	1	Rubber-tired diesel-powered machine with a bucket attached to the front. The bucket can be used to dig material, transport, and load it into trucks or a hopper. Typically used to load haul trucks at the mine face.
CAT 992G loader	1	
CAT 992K loader	2	
CAT 777G 100 Ton Haul Truck	5	Used to transport aggregate from active mining areas to the aggregate processing plant and to stockpile areas.
CAT 770G Water Truck	1	Used to water the stockpile area and access roads for dust control and suppression.
CAT 14M Grader	1	Used for development and maintenance of onsite haul roads.

Table 3-7 Equipment and Usage for Ongoing Operations

Equipment ¹	Typical Number	Purpose
CAT D9T Dozer	1	Track-mounted diesel-powered machine with a blade in front and a ripper in back. The ripper is used to control the speed of the dozer, while the blade is used to push large quantities of material. Can be used for stripping, reclamation, and surge feed to shovels/loaders.
CAT 352F Excavator	1	Track-mounted diesel-powered machine similar to a large backhoe with an open-mouthed bucket attached to a hydraulically operated boom to excavate material. A rockbreaker attachment may also be used to excavate the material. Excavators are used to break down over-sized rocks.
CAT 246B Skidsteer	1	Loading and unloading of construction materials.
CAT MD6290 Drill	1	Drilling for blasting operations.
ATLAS Copco DM65 Drill	1	Drilling for blasting operations.
Kenworth Blend Truck	1	Blasting operations
Ford Pickup F-250 Crew Cab	2	Used by employees for onsite maintenance and administration purposes.
Ford Pickup F-350 Crew Cab	1	
Chevrolet Pickup Crew Cab	1	
Toyota Tacoma Crew Cab	1	

Source: Equipment type and typical number per Section 5.4.3, *Equipment*, of "Mojave Life of Mine Reclamation Plan Amendment – Project Description" (Sespe Consulting 2023).

Notes

1. Lists typical equipment anticipated for use, specific equipment may change during the life of the project due to replacement of aging equipment and updated equipment and fleet averaging requirements.

Table 3-8 Project Daily and Annual Trip Generation Summary

Reclamation Activity	Days/Year	Roundtrips/Day	Roundtrips/Year	One-Way Trips/Day	One-Way Trips/Year
Reclamation Worker Trips					
Hydroseeding	300	5	1,500	10	3,000
Slope Preparation	150	5	750	10	1,500
Monitoring	150	2	300	4	600
Reclamation Worker Trips Subtotal		12	2,550	24	5,100

Table 3-8 Project Daily and Annual Trip Generation Summary

Reclamation Activity	Days/Year	Roundtrips/Day	Roundtrips/Year	One-Way Trips/Day	One-Way Trips/Year
Cement Plant Demolition Trips					
<i>Haul Trucks</i>	250	6	1,500	12	3,000
<i>Removal Personnel</i>	250	15	3,750	30	7,500
<i>Cement Plant Demolition Subtotal</i>		21	5,250	42	10,500
Total		33	7,800	66	15,600

Source: Sespe Consulting 2025e.

Water Use and Supply

The project proposes to continue to use the same amount of water on an annual basis, with the four (4) existing wells (Big Meadow Well (5), Solar Well B-9, Potable Well #6 (2), and Quarry Well R4-WE2) serving as the supply source. Quarry Well R4-WE2 is located within the project site, approximately 2,500 feet north of the cement plant. Potable Well #6 (2) is located outside of, but adjacent to, the northern boundary of the project site along Oak Creek Road. Solar Well B-9 is situated along Oak Creek, approximately 3.16 miles southwest of Potable Well #6 (2) and about 1.91 miles (10,100 feet) east of the project's western boundary; Big Meadow Well (5) is located approximately three miles west of the western boundary of the project site.

Table 3-9, Existing Operations Active Well Groundwater Production (April 30, 2017 – May 1, 2018), lists the production from the four active wells during the period of April 30, 2017, through May 1, 2018. As shown in the table, the wells produced approximately 244 acre-feet (79,611,550 gallons) of water for site operations and this amount is considered representative of the annual consumptive use for ongoing operations.

Table 3-9 Existing Operations Active Well Groundwater Production (April 30, 2017 – May 1, 2018)

Well	Water Production (acre-feet)
Big Meadow Well (5)	156.1
Solar Well B-9	46.6
Potable Well #6 (2)	3.4
Quarry Well R4-WE2	38.1
Total Production	244.3

Source: Table 6-1 Summary of Water Level Well Costs of "CalPortland Company Water Supply Assessment for Mojave Mine Life Extension Project" (Provost & Pritchard Consulting Group 2018).

The water from the four wells which supply the project is used to support ongoing mining and reclamation activities, as well as for the production of cement. There are three additional existing wells that act as a standby/backup source: Solar Well B-2, Potable Well #5 (2), and Quarry Well R4-WE1. These existing water wells would continue to serve the site, and no new onsite wells

are proposed. While no new water sources would be required, the project proponent also maintains rights to the source water from the Tehachapi-Cummings County Water District (TCCWD) under an existing water supply agreement. The TCCWD agreement commits to supplement water needed beyond that quantity provided by the groundwater wells and surface water required for the Mojave Mine operations, if necessary.

Domestic Wastewater

Existing operations utilize a combination of plumbed restroom facilities with septic system(s), and portable toilets and handwashing or sanitization facilities. Wastewater treatment service is not proposed and continued operations would continue to use those facilities and no additional septic systems are proposed. Portable toilets utilize secondary containment (i.e., tray) and are regularly serviced by a local contractor which transports the waste by truck to facilities authorized to dispose of such waste. These practices would continue under future operations.

Dust Control

The project proponent maintains a Fugitive Dust Control Plan that specifies Reasonably Available Control Measures (RACMs) for existing operations, as listed in **Table 3-10, Existing Operations Sources of Fugitive Dust and Reasonably Available Control Measures (RACMs)**. These or alternative and as effective measures are anticipated to continue to be implemented as necessary during ongoing and continued operations.

Table 3-10 Existing Operations Sources of Fugitive Dust and Reasonably Available Control Measures (RACMs)

Source of Fugitive Dust	RACM for Source
Quarry Haul Roads – Permanent, daily use, includes haul roads of active operations	<ul style="list-style-type: none"> Speed limit of 35 mph in quarry areas (plant policy). Apply water using truck as necessary to control dust. Treatment with dust palliative, such as MgCl or equivalent, when necessary.
Quarry Haul Roads – Non-permanent, Intermittent use	<ul style="list-style-type: none"> Speed limit of 35 mph in quarry areas (plant policy). Apply water using truck as necessary to control dust.
Quarry Roads Unpaved, more than 25 vehicle trips per day	<ul style="list-style-type: none"> Speed limit of 35 mph in quarry areas, 15 mph in plant (plant policy). Apply water using water truck as necessary. Treatment with palliative, such as MgCl or equivalent as necessary.
Quarry Blasting	<ul style="list-style-type: none"> No applicable RACM. Blasting exempt per Rule 402.
Quarry loading from shot rock piles	<ul style="list-style-type: none"> Apply water to shot rock piles using water truck monitor as necessary. Minimize material drop height when loading/unloading.
Quarry Drilling	<ul style="list-style-type: none"> Drills equipped with water injection. Inject water as necessary to control dust.
Quarry Crushing – Truck dumping to crusher hopper	<ul style="list-style-type: none"> Water sprays at dump hopper. Sprays activate automatically as truck dumps. Used as necessary for dust control.

Table 3-10 Existing Operations Sources of Fugitive Dust and Reasonably Available Control Measures (RACMs)

Source of Fugitive Dust	RACM for Source
Outdoor Raw Materials Stockpiles	<ul style="list-style-type: none"> • Apply water using water truck monitor or spray heads as necessary to control dust. • Minimize material drop height when loading/unloading.
Plant Roads – Unpaved, more than 25 vehicles trips per day	<ul style="list-style-type: none"> • Speed limit of 15 mph in plant areas (plant policy). • Apply water and/or dust palliative to control dust & graveled 1/2 mile of roads west of garage.
Plant Roads – Paved	<ul style="list-style-type: none"> • Speed limit of 15 mph in plant areas (plant policy). • Sweep or wash with water as appropriate.
Outdoor Clinker Stockpiles	<ul style="list-style-type: none"> • Cover clinker stockpiles with tarps when finished activity (PTO) condition. • Compaction of clinker stockpile. NESHAPs • Minimize material drop heights. • Cleanup clinker spills within 3 days.
High Wind Events	<ul style="list-style-type: none"> • Coal stockpile will be watered to control dust. • The water truck will operate continuously on haul roads. • No blasting will be done at the quarry. • All spilled material will be cleaned immediately.

Source: Sources of Fugitive Dust and Reasonably Available Control Measures (RACM) from Kern County Air Pollution Control District Fugitive Dust Control Plan for Mojave Plant (undated) as provided in Appendix C of "Air Quality and Greenhouse Gas Assessment Mojave Life of Mine Reclamation Plan Amendment" (Trinity Consultants 2025).

Hazardous Materials and Waste

Refueling of off-road equipment (e.g., dozer, loader, grader, etc.) will primarily occur at the adjacent cement plant, with the remainder consisting of mobile refueling. However, in the event that a spill of hazardous or regulated material occurs, such as diesel fuel, measures are proposed to be taken to control and clean up the spill, and notifications will be made to the appropriate landowners as indicated in the facility Spill Prevention Control and Countermeasure Plan (SPCC). Site employees and/or onsite contractors currently, and will continue to, maintain spill kits on site for use in case of a spill.

The following existing best management practices (BMPs) and plans are implemented and will continue to be implemented during continued mining and proposed reclamation:

1. Handling of all blasting agents (drilling and blasting would continue to be conducted in conjunction with mining, however no drilling and/or blasting associated with reclamation activities would be conducted) shall be limited to qualified and licensed blasting contractors at all times and stored only in approved containers, specifically designed for the safekeeping of explosives.
2. Any spillage of petroleum products, fuels, lubricants, or other chemicals shall be immediately cleaned up, and properly disposed of in strict accordance with applicable state and federal regulations.
3. A current inventory of the types and quantities, along with Safety Data Sheets, shall be maintained onsite by qualified personnel. Relevant storage, use, and clean-up

information shall be included in the site's pollution prevention plans, including (but not limited to); the Spill Prevention, Control, and Countermeasures (SPCC) Plan, Hazardous Materials Business Plan (HMBP), and Stormwater Pollution Prevention Plan (SWPPP).

4. All refuse generated within the project boundary will be hauled to the cement plant and be disposed of in an enclosed container, then transferred to an authorized off-site landfill facility, consistent with all applicable regulations. No refuse will be left within the project boundary to negatively impact surface water quality.
5. Refueling of off-road equipment (dozer, loader, grader, etc.) will occur at the adjacent cement plant or via mobile fuel truck. Mobile refueling of off-road equipment within the mining area will be subject to the same BMPs and controls.

Site Access and Safety

The portion of the project site east of Tehachapi Willow Springs Road is accessed from an existing approximately 1-mile private access road that connects to Oak Creek Road approximately 3.5 miles east of Tehachapi Willow Springs Road. Access to the project site west of Tehachapi Willow Springs Road is via an existing access point along Tehachapi Willow Springs Road where it bisects the southwestern portion of the site; an additional access point along Tehachapi Willow Springs Road to provide access to the project site west of Tehachapi Willow Springs Road may potentially be established in the future at a location yet to be determined. Public access to the site would be restricted with perimeter fencing, locked gates, and boulders, as needed. As needed, the gates would have signs reading "No Trespassing." Perimeter fencing and gates may be installed to restrict access to foot traffic and motor vehicles from the public roads, and would remain in place during mining and reclamation activities as needed.

Erosion and Sediment Control

Erosion and sedimentation control would be implemented during continued mining operations and reclamation. Continued mining operations will develop sediment ponds, diversion ditches, and temporary sediment control BMPs to minimize erosion and sedimentation caused by mining operations. The final reclamation site configuration would establish 21 drainage basins delineated with diversion ditches constructed to direct runoff flows from stockpile areas to sediment ponds. Conceptual diversion ditch and sediment pond designs would be verified prior to and during operations as contributing watersheds evolve during continued mining operations.

Storm water controls and BMPs will be maintained during ongoing mining operations in accordance with the facility's Storm Water Pollution Prevention Plan. The main storm water channels will be designed to safely pass the estimated 100-year peak flow with erosion control BMPs designed for 20-year/1-hour intensity storm events per SMARA regulations. Peak flow for diversion channels will be estimated using the 100-year, 1-hour intensity storm event and the rational method, with 6-inch freeboard specifications included per the Kern County Hydrology Manual.

As part of reclamation, any of the overburden stockpile areas that will not drain to a sediment pond, diversion ditch, or mining pit due to the localized topography would employ erosion and sediment control measures. In accordance with the Kern County Development Standards for drainage, sediment ponds are designed to retain the 10-year, 5-day runoff volumes and safely

pass the estimated 100-year, 1-hour peak flow; and diversion ditches and channels will safely carry the 100-year, 1-hour peak flow. Sediment ponds developed during continued mining operations would remain in place for use in storm water management during reclamation and would naturally fill with sediment over time. Any excess materials which are not processed and sold as construction materials prior to final reclamation would remain in place in the 12 proposed stockpiles proposed to remain upon final reclamation. Stockpiles and backfilled areas would be revegetated to provide soil stability.

3.4.3 Reclamation Plan

The project proponent proposes to reclaim the site in accordance with the proposed reclamation plan. Upon cessation of mining activities, the proposed reclamation plan defines areas within the reclamation plan boundary to be reclaimed and revegetated with native species and reclaimed to open space. Proposed reclamation includes recontouring, stabilizing, revegetation, and monitoring of final slopes and disturbed mining and stockpile areas; reclamation of roads not required for post-reclamation access and security, removal of ancillary equipment and facilities; and removal of the processing plant and cement plant and all cement plant related facilities. The proposed reclamation plan does not include removal of any rail facilities outside the reclamation plan boundary, nor the removal of any wind turbines.

Equipment Removal and Site Reclamation

Upon completion of site operations, existing onsite structures, including but not limited to the existing processing and cement plant and ancillary structures, would be dismantled and properly removed from the site during reclamation. Temporary structures, such as conveyor systems would be dismantled and removed during final reclamation. All 22 wind turbines onsite, including the 8 owned by the project proponent, currently supply power to the electrical grid. The 8 wind turbines owned by the project proponent currently only supply surplus power beyond what the project proponent uses to the electrical grid; they will supply all power generated to the electrical grid upon completion of reclamation. All onsite wind turbines would remain after reclamation is complete and would continue supplying renewable energy to the public power grid. No other temporary and/or permanent structures that would require specific removal and/or reclamation are found onsite.

All mobile equipment (e.g., loaders, dozers, scrapers, water truck, etc.) would be removed following the completion of reclamation activities. Any residual wastes (e.g., debris, revegetation materials) would also be removed and properly disposed of in accordance with applicable health and safety regulations and/or local ordinances.

Drill holes, water wells, or any surface openings other than the mining pits, would be closed during reclamation in accordance with applicable requirements.

Quarry Reclamation

Quarry slopes would be contoured to their designed final slope angle as part of mining operations. Overall slope angles would be formed as a series of 45-degree inter-ramp slopes, haul roads, and step-ins as required. The maximum recommended slope angle for the pits is

variable and dependent on slope heights ranging from 45- to 37.5-degree angles and 0-1,675-foot slope heights, as shown in **Table 3-6, Mine Pits A through D Planned Final Slope Design Angles**. Haul road and step-in placements would be situated to reduce the overall slope angles to maximum slope angle as slope height requires and to limit the maximum inter-ramp slope height to 1,000 feet in pits.

Overburden Stockpiles Reclamation

Overburden would be placed: (a) as backfill in Pits E and F as part of mining operations during excavation of other pits, and (b) in one of twelve permanent stockpiles as shown on **Figure 3-8, Proposed Final Reclaimed Conditions**.

Final stockpiles formed during final reclamation would have slope inclinations no steeper than 1.75H:1V (i.e., approximately 30 degrees) and be placed to a maximum height of 830 feet. Slope stability analysis of the overburden/interburden stockpiles assumed that the tops of stockpiles are near horizontal and that a minimum 50-foot offset is maintained between the toe of a stockpile and the crest of an adjacent pit. As part of reclamation activities, the stockpiles would be revegetated as this is a general SMARA requirement. The project proponent recognizes that final stockpile slopes would need to be constructed at an inclination that would allow for successful stockpile revegetation, which may be less than the maximum planned inclination of 1.75H:1V. In addition to access roads, benches (15-foot minimum) are recommended per a Slope Stability Assessment (Golder Associates, Inc., October 11, 2021) for the final stockpile slopes every 50 vertical feet to control erosion on the slope faces and allow for the efficient collection and management of stormwater on the stockpiles; CalPortland will implement the stockpile slope stability measures recommended by Golder Associates, Inc. Temporary and permanent erosion and sediment controls would be installed as necessary to minimize erosion rates from the overburden/interburden stockpiles.

Revegetation

The proposed project would provide for revegetation of certain disturbed areas, as described in the Reclamation Plan, sufficient to meet performance standards identified in the proposed reclamation plan. The project proponent's stated goal of revegetation is to restore the native plant communities found onsite. The achievement of a successful revegetation program involves a number of steps. The steps include controlling access, removing sources of onsite human disturbance, reducing/eliminating non-native plant species, and reseedling with native plant species as necessary.

Seeds for revegetation would either be obtained from onsite collections or purchased from a third party, dependent on the cost effectiveness of collecting and storing as compared to purchasing commercial seed. The revegetation success would be assessed using performance standards provided in the proposed revegetation plan and summarized in **Table 3-11, Proposed Revegetation Performance Standards**. The preliminary seed mix proposed for reclamation is presented in **Table 3-12, Proposed Revegetation Plant Seed Mix**.

Table 3-11 Proposed Revegetation Performance Standards

Landform	Perennial Cover (%) ¹	Species Diversity (Perennial) ^{1,2}	Species Density ^{1,2}
Rocky Slopes	14	6	18
Gently Sloping Terrain	24	7	28
Steep Terrain	22	6	28

Source: Table 5-2, Revegetation Performance Standards, of "Mojave Life of Mine Reclamation Plan Amendment" (Sespe Consulting 2026).

Notes:

1. Proposed performance standards based upon 45% of baseline cover, and 40% of baseline species density/diversity.
2. Native perennials per 50 square meters.

Table 3-12 Proposed Revegetation Plant Seed Mix

Common Name	Scientific Name	Application Rate (pounds of pure live seed per acre)
Burrobush	<i>Ambrosia dumosa</i>	0.50
Cheesebush	<i>Ambrosia salsola</i>	1.00
Fiddleneck	<i>Amsinckia tessellata</i>	0.25
Evening primrose	<i>Cammissonia californica</i>	0.25
Rigid spineflower	<i>Chorizanthe rigida</i>	0.25
Desert pincushion	<i>Chaenactis fremontii</i>	0.25
Sandaster	<i>Corethrogyne filaginifolia</i>	1.00
Rabbitbrush	<i>Ericameria nauseous</i>	1.00
Mormon tea	<i>Ephedra nevadensis</i>	2.00
Narrow leaf goldenbush	<i>Ericameria linearifolia</i>	0.75
Flat-topped buckwheat	<i>Eriogonum fasciculatum</i>	2.00
Spiny hopsage	<i>Grayia spinosa</i>	1.00
matchweed	<i>Gutierrezia californica</i>	1.00
Thomas' buckwheat	<i>Eriogonum thomasi</i>	0.50
California juniper	<i>Juniperus californica</i>	3.00
Creosote bush	<i>Larrea tridentata</i>	1.00
Desert beardtongue	<i>Penstemon incertus</i>	0.75
Antelope Bitterbrush	<i>Purshia tridentata</i>	1.00
Phacelia	<i>Phacelia distans</i>	0.25
Chia	<i>Salvia columbariae</i>	0.25
Desert needlegrass	<i>Stipia speciosa</i>	1.00
Cotton thorn	<i>Tetradymia spinosa</i>	1.00
TOTAL pounds per acre		20.00

Source: Table 5-5, Preliminary Seed Mix, of "Mojave Life of Mine Reclamation Plan Amendment" Sespe Consulting 2026)

Revegetated areas would be monitored using qualitative and quantitative methods such as visually inspecting vegetation diversity and calculating percentage for cover and density.

Biological qualitative monitoring would be performed on a quarterly basis during the first two years of revegetation efforts (reclamation years 1 and 2) and biannually during reclamation years 3 to 5 to track the success of the revegetation effort. Reporting would include implementation reports, monitoring report, and annual reports. The annual reports would provide a summation of reclamation/revegetation activities, results of monitoring, and performance standard assessments.

Following completion of mining operations, the typical sequence of revegetation activities would be undertaken:

- Recontouring of planting areas, if necessary;
- Control of invasive weeds;
- Placement of topsoil and subsoil;
- Installation of temporary irrigation systems, if necessary;
- Installation of erosion control devices;
- Planting and seeding;
- Maintenance and monitoring; and
- Reporting.

Non-native invasive plants that have been categorized by the California Invasive Plant Council (Cal-IPC) as “High” (severe ecological impacts on physical processes, plant and animal communities, and vegetation structure) or “Moderate” (substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure) in terms of ecological threat would be controlled as necessary within the revegetation areas for a minimum of three years in order to prevent aggressive weeds from out-competing native plant species for resources (e.g., space, water, nutrients, and light). These invasive weeds will be removed mechanically or by hand, if feasible. In circumstances where mechanical control is not effective, EPA-approved systemic herbicides may be used.

Revegetation test plots are proposed to be established to test the seeding methodologies on the topographic aspects of the mining area. The test plots would provide data to be used for assessing successful revegetation. Test plots would involve rocky slopes, gently sloping terrain, and steep terrain, and would involve various seeding methods, including seeding by hand, hydroseeding, and imprinting with and without micorrhizal fungi.

3.4.4 Schedule and Workforce

The existing operation maintains approximately 21 employees and typically has 16 employees within the vested quarry at a time. The project proponent estimates that maximum reclamation operations would result in an additional 24 employees for hydroseeding, grading, and monitoring. Reclamation activities would generally occur during daylight hours. However, there is a potential that some reclamation activities may occur during dusk or nighttime hours.

Reclamation activities (notwithstanding revegetation monitoring) at the site are expected to be completed in approximately two years (completed in the year 2224) following cessation of mining operations in 2222. Revegetation monitoring is anticipated to continue for an additional 5 years beyond 2222 (ending in 2227).

3.4.5 Drainage and Flood Control Measures

The project application includes a “Drainage Report for CalPortland Company Mojave Quarry” (Sespe 2025g) that evaluates and describes conceptual diversion ditch and sediment pond designs and illustrates a drainage plan for final reclaimed conditions. The conceptual diversion ditch and sediment pond designs identified in the Drainage Report are proposed to be verified prior to and during operations as the contributing watersheds change. Designs would be completed in general accordance with the design criteria and typical details provided in the Drainage Plan with actual locations and details determined closer to the time of construction rather than presented in detail in proposed design drawings. Main storm water channels and sediment ponds would be designed to safely pass the estimated 100-year peak flow with erosion control BMPs designed for the 20-year, 1-hour intensity storm event per SMARA regulations. Peak flow for diversion channels (ditches) would be estimated using the 100-year, 1-hour intensity storm event and the rational method per the Kern County Hydrology Manual. A 6-inch freeboard is required for all channels in accordance with Kern County Development Standards.

Erosion control would primarily be provided by placing riprap in key areas using rock suitable for riprap anticipated to be available onsite. Sediment would be managed through various BMP options such as placing rock check dams in the collection channels at select locations. Construction material stockpiles would be graded to promote runoff into the open pits where possible; benches would discourage runoff down the stockpile faces when possible. Runoff directed into the open pits would infiltrate or evaporate; therefore, water accumulation is not expected (with the exception of Pit B due to expected groundwater level, as shown on **Figure 3-8, Proposed Final Reclaimed Conditions**).

Where topographically feasible, runoff from disturbed areas will be diverted directly into the mining pits. For areas where it is not possible to direct water into the pits, runoff will be collected in sediment ponds. Sediment pond (e.g., detention basin) design capacity would be based on the Intermediate Storm Design Discharge (ISDD) five (5)-day design storm runoff volumes. Ponds would be provided in drainage subbasins where runoff cannot be routed to mine pits. Final configuration of the sediment ponds may incorporate a combination of excavation and fill in order to meet the required capacity. Ponds would be constructed with an emergency spillway sized to pass the peak flow of the 100-year storm in the event of a major storm occurring while ponds are full or the outlet pipe does not function as designed. The embankment design would have a configuration of 2H:1V upstream and downstream slopes with a 15-foot-wide access road along the crest. The embankments would also be engineered and designed to current applicable standards and sized to avoid classification as jurisdictional dams under the California Department of Water Resources Division of Safety of Dams’ statutes. Storm water flowing from large storms or successive storms that exceed the design capacity would be routed through the sediment ponds via an emergency spillway protected with riprap. Sediment ponds would remain

in place following the completion of mining for use in storm water management during and following reclamation, and would be allowed to naturally fill with captured sediment over time.

Several construction material stockpile areas would not drain to a sediment pond, diversion ditch, or mining pit. These areas would employ additional erosion and sediment control measures, including installation of straw wattles at the top-of-slope, toe-of-slope, and at 10-foot intervals on the slope face along the contours, and with these areas revegetated pursuant to the proposed revegetation plan.

3.4.6 Utilities

Project reclamation activities contemplated within the Reclamation Plan Amendment are not anticipated to require the use of natural gas or electricity, and no new or additional utilities or service systems are identified as necessary for proposed reclamation. (Sespe Consulting, 2023; 2025d). Portable toilets and handwashing/sanitation facilities would be provided for workers involved in reclamation activities and no wastewater treatment systems or services would be required for reclamation.

There are no known oil or gas wells located within the project boundary. Additional information regarding the potential to encounter currently unidentified wells is included in **Section 4.8, Hazards and Hazardous Materials**, of this EIR.

3.4.7 Vehicle Trip Generation Associated with Reclamation Activities

Vehicle trip generation associated with proposed reclamation activities is estimated in the *Transportation and Vehicle Miles Traveled (VMT) Memorandum – CalPortland Company, Proposed Mojave Mine Reclamation Plan Amendment* (Sespe Consulting, 2025e) submitted by the project proponent. The memorandum identifies that vehicle trips associated with reclamation would be generated by activities including slope preparation, hydroseeding exposed slopes, demolition, and monitoring/project oversight. **Table 3-8, Vehicles and Average Daily Trips for Reclamation**, above, summarizes the daily and annual trip generation estimated for worker vehicle trips associated with reclamation activities.

3.4.8 Water Use

Reclamation activities would require water for dust control. Water for dust control purposes during reclamation is estimated at 77 acre-feet per year and is proposed to be obtained using the groundwater wells that provide water supply for ongoing operations as discussed above. Annual and total water usage is summarized in **Table 3-13, Proposed Water Use for Reclamation**.

Table 3-13 Proposed Water Use for Reclamation

Water Source	Annual Water Usage	Total Water Usage for Final Reclamation
Existing Groundwater Wells	77 acre-feet	154 acre-feet (assumes two years for final reclamation activities)

Water produced from groundwater wells would not be used for domestic purposes. Bottled drinking water for workers would be transported to the site as necessary. No surface water would be used for reclamation activities, and the project would not involve diversions or storage of surface water for water supply.

3.5 Project Objectives

The proposed project is intended to achieve the following objectives as identified by the project proponent:

- To amend the 1979 reclamation plan to include the reclamation of mineral recovery activities within portions of the vested facility.
- To comply with SMARA's reclamation and financial assurance requirements for certain areas included in the vested facility that are not included in the 1979 reclamation plan.
- To allow the project proponent to continue reclamation of mineral recovery activities within portions of its vested facility so that the project proponent can continue to provide suitable quantities of quality feedstock for its existing cement plant in order to serve market demand.
- To allow the project proponent to efficiently manage overburden generated during mining operations.
- To make vested reserves and operational areas within the facility available, subject to State reclamation requirements under SMARA, to the project proponent.
- To provide for a source of suitable feedstock located as close as possible to the project proponent's existing cement plant in order to avoid the impacts and costs of trucking feedstock long distances.
- To allow the project proponent to continue to provide local high-paying employment opportunities and other economic benefits to the community.

3.6 Proposed Discretionary Actions/Required Approvals

The Kern County Planning and Natural Resources Department as the CEQA Lead Agency (per CEQA Guidelines Section 15052) has discretionary responsibility for the Mojave Life of Mine Reclamation Plan Amendment Project by CalPortland Company. To implement this project, the project proponent may need to obtain permits/approvals, including but not limited to, the discretionary permits/approvals included in **Table 3-14, *Proposed Discretionary Actions/Required Approvals***.

Table 3-14 Proposed Discretionary Actions/Required Approvals

Agency	Required Plan or Approval
Local	
Kern County	<ul style="list-style-type: none"> • Certification of an Environmental Impact Report • Adoption of a Mitigation Measure Monitoring Program (MMMP) • Adoption of CEQA Findings pursuant to State CEQA Guidelines Section 15091 • Adoption of CEQA Statement of Overriding Considerations pursuant to State CEQA Guidelines Section 15093 • Approval of a Reclamation Plan Amendment • Approval of Water Well Permit(s) for existing water well(s) • Permit for Explosives (Sheriff's Office)
Regional	
Eastern Kern Air Pollution Control District (EKAPCD)	<ul style="list-style-type: none"> • Approval of Fugitive Dust Emission Control Plan
State	
Regional Water Quality Control Board, Lahontan Region (Lahontan RWQCB)	<ul style="list-style-type: none"> • Waste Discharge Permit • Stormwater Pollution Prevention Plan (SWPPP)
State Water Resources Control Board (SWRCB)	<ul style="list-style-type: none"> • National Pollutant Discharge Elimination System (NPDES) Industrial General Permit and Stormwater Pollution Prevention Plan (SWPPP) • Spill Pollution Control and Countermeasure Plan
California Department of Fish and Wildlife (CDFW)	<ul style="list-style-type: none"> • California Fish and Game Code Section 1602 Streambed Alteration Agreement • Incidental Take Permit
Federal	
U.S. Fish and Wildlife Service (USFWS) and/or U.S. Army Corps of Engineers	<ul style="list-style-type: none"> • Approval of appropriate permits, if required

Notes: The actions/approvals listed above are potentially required and do not necessarily represent a comprehensive list of all possible discretionary permits/approvals required. Other additional permits or approvals from federal, state, and/or local agencies may be required for the proposed project.

3.7 Cumulative Effects Overview

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

Kern County Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports requires a 6-mile radius to assess cumulative impacts because development in

rural areas tend to affect a larger geographical area than development located in urban areas (Kern County 2006). Kern County records were reviewed to determine the number of permitted or planned projects within the 6-mile radius of the project site.

The cumulative analysis in **Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures***, of this EIR is based on a qualitative and quantitative cumulative analysis, which includes all of the projects located within a 6-mile radius of the proposed project for which applications were received by Kern County in the previous three years (i.e. July 16, 2021 through July 16, 2024), as well as growth projections to the Year 2030. Kern County records were also reviewed to determine if there were any mining/reclamation-related projects (“like projects”) within the same Air District as the proposed project (Mojave Desert Air Basin) for which application(s) were received by Kern County in the previous three years (i.e. July 16, 2021 through July 16, 2024), however, no such application(s) were received by Kern County. Different resource-specific analyses use this 6-mile radius unless specific methodology deems other supplemental approaches are appropriate.

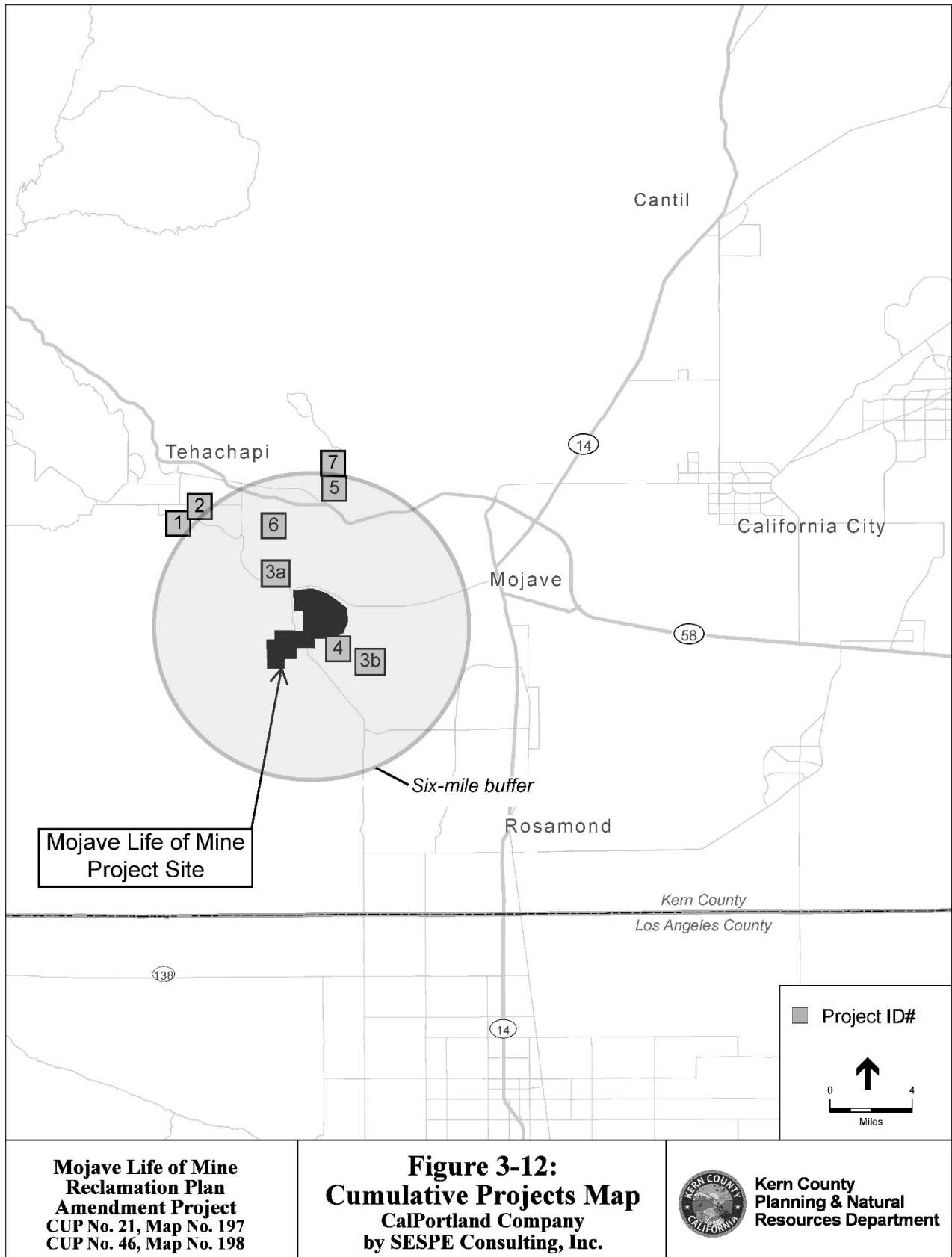
The *Kern County General Plan* is the primary guide for land development in the vicinity of the proposed project. The Land Use, Open Space, and Conservation Element assumes continued growth in commercial and industrial development similar to the current growth rate and anticipates the future growth rate would parallel the future residential growth rate in the unincorporated areas of the County. Pending projects (i.e. application received by Kern County between July 16, 2021 and July 16, 2024) within a 6-mile radius of the proposed project are identified in **Table 3-15, *Cumulative Projects List within a 6-mile radius of the Proposed Project Site***, and on the corresponding **Figure 3-12, *Cumulative Projects Map***. These projects were considered when analyzing cumulative conditions and impacts.

Table 3-15 Cumulative Projects List within a 6-mile radius of the Proposed Project Site

Name	Project Location	Map ID	Project	Zone Map	Section/ Township/Range	Approximate Acreages	Status
Tobias W. Semerenko PLN21-01193**	Orrick Avenue, east of Wagner Drive	1	Map 166-33, SWES - Small Wind Energy System	166-33	Section 33/Township 32S/Range R33E	2.42	Applied
Gabriela Rocha-Zacarias PLN23-00840**	17101 Grove Ave, Tehachapi, CA	2	Conditional Use Permit for cargo containers	166-33	Section 33/Township 32S/Range R33E	1.92	In Review
Stuart Baird PLN23-00818*	12490 90th Street West, Mojave, CA	3a / 3b	Conditional Use Permits for BESS at existing wind farm	197 198	Section 32/ Township 11N/Range 13 W. Section 10/Township 11N/Range 14W	277.03	Applied

Table 3-15 Cumulative Projects List within a 6-mile radius of the Proposed Project Site

Name	Project Location	Map ID	Project	Zone Map	Section/ Township/Range	Approximate Acreages	Status
EdSan 3 Solar PV & Storage, LLC by Simon Day PLN23- 00706*	Northwest corner of Section 31/Township 11N/Range 13W	4	Map 197, GPA, ZCC, CUP; New PV Power Generation and Storage	197	Section 31/Township 11N/Range 13W	22.71	Applied
Tracy Jones PLN23- 00765**	20156 Sand Canyon Rd, Tehachapi, CA	5	General Plan Amendment/Specific Plan Amendment/Zone Change Case/Precise Development Plan. To allow Industrial and Agricultural with parks	167	Sections 27 & 28/Township 32S, Range 34E	300.66	Applied
PLN22- 00139**	East side of Jameson Street, ½ mile south of State Route 58	6	Map 167, PD 2, Modification - Dormitory Bldg Veterans Training Facility	167	Section 31/Township 32S/Range 34E	336.04	Applied
Thomas Kay, Jr. PLD21- 00069**	21556 Sand Canyon Rd, Keene, CA	7	VTPM 12429 proposing to divide a 159.70 ac parcel into a 28.13 ac parcel and a 131.57 ac parcel	167	Township 32S/Range 34E	154.84	Prelim. Review



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Chapter 4

**Environmental Setting, Impacts, and
Mitigation Measures**

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Chapter 4

Environmental Setting, Impacts, and Mitigation Measures

4.0 Introduction

This chapter is devoted to resource topics. Impacts on a resource are evaluated for the project site in each section of this chapter. For each resource, a description of the environmental setting, including relevant data, is presented. The impacts of the project on the resource are evaluated in terms of significance, and mitigation measures are identified. As lead agency, Kern County is responsible for determining what mitigation measures are appropriate and feasible. Resource sections include:

- **Section 4.1** - Aesthetics
- **Section 4.2** - Agricultural and Forestry Resources
- **Section 4.3** - Air Quality
- **Section 4.4** - Biological Resources
- **Section 4.5** - Cultural Resources
- **Section 4.6** - Energy
- **Section 4.7** - Geology and Soils
- **Section 4.8** - Greenhouse Gas Emissions
- **Section 4.9** - Hazards and Hazardous Materials
- **Section 4.10** - Hydrology and Water Quality
- **Section 4.11** - Land Use and Planning
- **Section 4.12** - Mineral Resources
- **Section 4.13** - Noise
- **Section 4.14** - Public Services
- **Section 4.15** - Transportation
- **Section 4.16** - Tribal Cultural Resources
- **Section 4.17** - Utilities and Service Systems
- **Section 4.18** - Wildfire

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Section 4.1

Aesthetics

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4.1.1 Introduction

This section of the Environmental Impact Report (EIR) discusses impacts associated with the potential for the proposed project to affect the visual character or quality of the project site and its surroundings and any mitigation measure that would reduce those impacts, as applicable. Changes to the existing visual character of the project site will occur from vested mining operations prior to implementation of the proposed project and these changes are not impacts of the proposed project. For this analysis the *baseline* is the anticipated future project site condition at the completion of vested mining pursuant to the mine plan discussed in **Chapter 3, Project Description**, and illustrated on **Figure 3-7, Proposed Maximum Extent of Excavation**, in **Chapter 3**. Aesthetic impacts of the proposed project are assessed against the future mined condition baseline. Nonetheless, for reference only, the visual simulations included in this Section also include visual simulations of existing (as of May 2021) conditions (included as **Figures 4.1-2, 4.1-5, 4.1-8, 4.1-11 and 4.1-14**).

Aesthetics, as addressed in the California Environmental Quality Act (CEQA), refers to visual considerations in the physical environment. Because a person's reaction and attachment to a given viewshed are subjective, visual changes inherently affect viewers differently. Accordingly, aesthetics analysis, or visual resource analysis, is a systematic process to logically assess visible change in the physical environment and the anticipated viewer response to that change. The *Aesthetics* section of this EIR describes the landscape character of the project site and surrounding area under anticipated future baseline conditions; views of the site from various on-the-ground vantage points under anticipated future baseline conditions; the landscape changes that would be associated with the proposed project; and the degree to which those changes could adversely affect views.

This analysis uses visual simulations prepared to demonstrate baseline conditions (included as **Figures 4.1-3, 4.1-6, 4.1-9, 4.1-12, and 4.1-15** in this section) and the proposed project (included as **Figures 4.1-4, 4.1-7, 4.1-10, 4.1-13, and 4.1-16** in this section). Regulatory standards were also investigated and analyzed, including the *Kern County General Plan* and the Kern County Zoning Ordinance.

Visual Resource Terminology and Concepts

When viewing the same landscape, people may have different responses to that landscape and any proposed visual changes, based on their values, familiarity, concern, or expectations for that landscape and its scenic quality. Because each person's attachment to and value for a particular landscape is unique, visual changes to that landscape inherently affect viewers differently. However, generalizations can be made about viewer sensitivity to scenic quality and visual changes. Recreational users (e.g., hikers, equestrians, tourists, people driving for pleasure) are expected to have high concern for scenery and landscape character. People who commute daily through the same landscape generally have a moderate concern for scenery, while people working

at industrial sites generally have a lower concern for scenic quality or changes to landscape character. The visual sensitivity of a landscape is affected by the viewing distances at which it is seen, such as close-up or far away. The visual sensitivity of a landscape also is affected by the travel speed at which a person is viewing the landscape (high speeds on a highway, low speeds on a hiking trail, or stationary at a residence).

Visual quality, which is a measure of a landscape or view's visual appeal, is evaluated according to the presence and characteristics of seven key components of the landscape:

1. landform,
2. vegetation,
3. water,
4. color,
5. adjacent scenery,
6. scarcity, and
7. cultural modifications.

Visual character is qualitatively defined by four primary components:

1. form,
2. line,
3. color, and
4. texture.

Generally speaking, projects that create a high level of contrast to the visual character of a project setting are more likely to generate adverse visual impacts because of visual incompatibility. Conversely, projects that create a low level of contrast to the visual character are less likely to generate adverse visual impacts because of inherent visual compatibility. The severity of project-related visual impacts can be quantified by comparing the difference in visual quality ratings from the baseline conditions (before) to post-project conditions (after).

4.1.2 Environmental Setting

Regional Character

The proposed project is located in an unincorporated area of the southeastern part of Kern County, approximately 6 miles southeast of the City of Tehachapi and 7.25 miles west of the unincorporated community of Mojave. (**Figure 3-1, Site Vicinity**).

The project site is located in the Mojave Desert on the southeastern edge of the Tehachapi Mountains. The elevation of the project area ranges from approximately 3,420 to 6,085 feet above mean sea level (amsl). Oak Creek Road runs east-west along the project site's northern boundary.

Tehachapi Willow Springs Road runs north-south along a northern portion of the project site's western boundary and bisects the southwestern portion of the project site.

The visual character of the area surrounding the project site is primarily comprised of undeveloped desert land, with few structures or built-out land uses. Developments in the vicinity of the project site include an electrical substation approximately 1.5 miles to the east and a solar array field approximately 1.7 miles to the east. Wind turbines are visible within areas west, north, and east of the site. The surrounding land uses consist of open space, dispersed rural residences, renewable energy generation (i.e., wind turbines and solar facilities), and other mining and industrial uses. The nearest residences are located 5,400 feet south of the project site west of Tehachapi Willow Springs Road, approximately 5,500 feet northwest of the project site adjacent to Tehachapi Willow Springs Road, and approximately 6,450 feet north of the project site adjacent to Cameron Canyon Road, and residence/commercial facility is located approximately 7,400 feet south of the project site west of Tehachapi Willow Springs Road. The Pacific Crest Trail (California Section E), at its nearest point, is approximately 600 feet northwest of the northwest corner of the project site near the Tehachapi Willow Springs Road / Oak Creek Road intersection. In addition to roads and scattered residential and other developments, wind turbines and electrical transmission facilities within the area surrounding the project site represent a substantial cultural modification to the visual character of the area.

The topography surrounding the project site to the south and east is generally flat. The topography to the west of the project site includes the Tehachapi Mountains. The project site is most visible when travelling on adjacent public roadways, specifically Oak Creek Road to the north and east (which provides access to the existing cement plant and mining operation via a private access road) and Tehachapi Willow Springs Road.

Local Character

The 4,367-acre project site is located at a transition area, with the Mojave Desert to the east and the Tehachapi Mountains to the west. Tehachapi Willow Springs Road runs generally north-south bisecting the site with approximately two-thirds of the site to the northeast and one-third of the site to the southwest.

The project site varies in topography, containing steep ridgelines, rocky hillsides, desert scrubland, rolling hills, and desert washes. Project site terrain west of Tehachapi Willow Springs Road includes a mountainous ridgeline transitioning into a lower ridgeline running generally from the northeast corner near the existing mined areas to the southwest. Rolling hills and valleys occur on either side of this portion of the ridgeline.

Most of the area consists of moderately steep to very steep ridgelines with rolling hills at the base of the mountainous terrain which support juniper woodlands and mixed woody scrub vegetation. Four plant communities identified within the project site consist of approximately 1,218 acres of Mojave Juniper Woodland and Scrub covering the majority of the foothills and slopes, approximately 920 acres of Mojave Mixed Woody Scrub occurring primarily at lower elevations in the flatter areas of the site, approximately 145 acres of Joshua Tree Woodland most of which is within the northern portion of the project site, and Riparian habitat. Fifteen ephemeral drainage

channels have been delineated within the project site, composing a total of approximately 3.51 acres, one of which supports patches of riparian habitat.

The eastern portion of the project site containing the existing CalPortland cement plant and loadout facilities is generally level. The eastern portion of the site west of the cement plant and the northern portion of the site contain more varied topography, with mine pits, overburden stockpiles, and access roads associated with the existing and ongoing mining operation. The central portion of the site, east of Tehachapi Willow Springs Road, is generally undisturbed open space with interspersed dirt roads and other minimal existing disturbances. The southwestern portion of the site, west of Tehachapi Willow Springs Road, is more mountainous with a southwest-northeast trending ridgeline reaching an elevation of approximately 6,085 feet amsl within the project site. This southwestern portion of the site contains interspersed dirt roads and other minimal existing disturbances.

Five key observation points (KOPs) were selected to illustrate the project site visibility and visual character under existing conditions (as documented in May 2021), anticipated future baseline, and proposed project conditions. The KOP locations and direction of view are shown on **Figure 4.1-1, Key Observation Points Map**, and include KOP 1 which is located along Oak Creek Road at the existing CalPortland cement plant facility driveway intersection, KOP 2 which is near the Oak Creek Road/Tehachapi Willow Springs Road intersection, KOP 3 which is located along Tehachapi Willow Springs Road approximately 0.3 mile north and west of the project site, KOP 4 which is located along Tehachapi Willow Springs Road approximately 0.2 mile south of the project site, and KOP 5 which is located along Tehachapi Willow Springs Road approximately 4.2 miles southeast of the project site. **Figures 4.1-2, 4.1-5, 4.1-8, 4.1-11 and 4.1-14** are photographs taken facing toward the site from the five KOPs, as taken in May 2021.

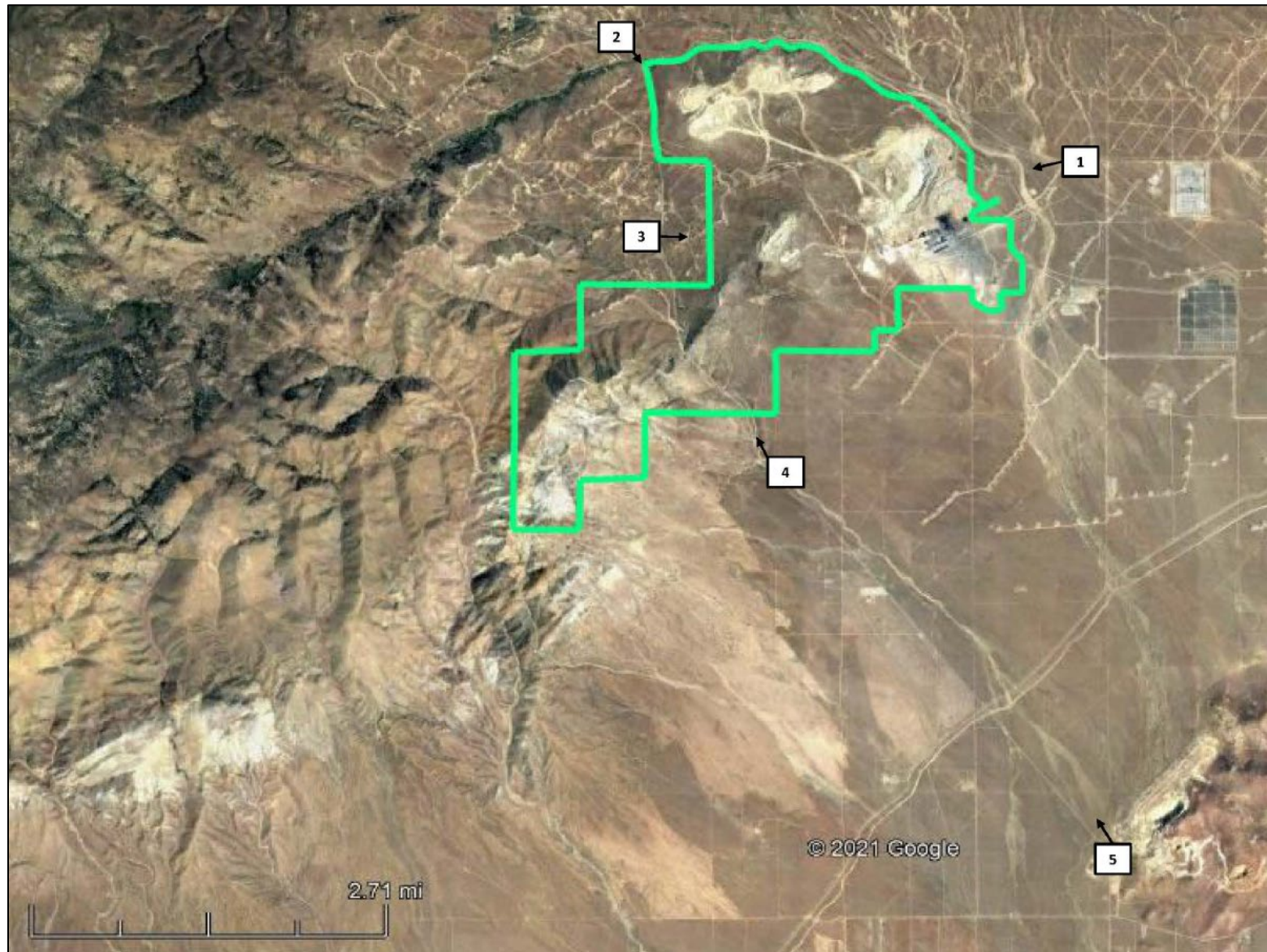


**Figure 4.1-1
Key Observation Points Map**

Baseline Conditions

The proposed project involves reclamation of the project site following the completion of vested mining operations. Vested mining operations are anticipated to continue for approximately 200 years at which time reclamation of the site would be performed in accordance with the project's proposed amended reclamation plan.

Changes to the existing visual character of the project site will occur during vested mining operations and as detailed above these changes are not impacts of the proposed project. Following the completion of vested mining, the visual character of the site as viewed from offsite areas constitutes the *baseline* condition against which visual changes associated with reclamation is compared, to assess visual impacts of the proposed project. During the next approximately 200 years, vested mining will enlarge existing mine pits (to correspond to the proposed Pits C, D, E, and F) and develop new mine pits (Pits A and B), and existing stockpiles will be enlarged and new stockpiles will be developed as part of continued vested mining activities. Additionally, mine access roads will be developed within the vested mining area, growth media stockpiles will be established, and other disturbances associated with mining operations will occur within the site. These modifications of the project site will occur as a result of vested mining operations and the resulting visual character of the project site constitutes the baseline condition.

The anticipated baseline condition of the project site's visual character as viewed from the five KOPs discussed above is illustrated in photographic simulations presented in **Figures 4.1-3, 4.1-6, 4.1-9, 4.1-12, and 4.1-15** (see **Impact 4.1-3** in **Section 4.1.4, *Impacts and Mitigation Measures***, below).

4.1.3 Regulatory Setting

State

California Environmental Quality Act

State CEQA *Guidelines* Section 15382 defines a "significant effect" on the environment to mean a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."

California State Scenic Highway System

The California Department of Transportation (Caltrans) administers the California Scenic Highway Program. The goal of the program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to the highways. The Caltrans Scenic Highway Coordinators maintain a list of highways that are either eligible for designation as scenic highways or have already been officially designated (Caltrans 2022). No Kern County highways are officially designated as State scenic highways. The segment of SR-58 between Mojave and Barstow is eligible for designation as a State scenic highway, but it has not been formally designated (Caltrans 2022). Additionally, the segment of State Route (SR)-14 between Highway 395 and SR-58 is eligible for designation as a State scenic highway,

but it has not been formally designated (Caltrans 2022). These segments are over 7 miles east of the project site.

Local

Kern County General Plan

The project would be subject to applicable policies and measures of the Land Use, Open Space, and Conservation Element of the *Kern County General Plan*. The Land Use, Open Space, and Conservation Element includes the following policies and implementation measures related to aesthetics and visual resources that would apply to the project.

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

1.10 General Provisions

1.10.7 Light and Glare

Policies

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

Implementation Measures

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

Chapter 2. Circulation Element

2.3 Highways

2.3.9 Scenic Route Corridors

Policies

- **Policy 1.** Kern County should consider designating local scenic highway routes, where appropriate, throughout the County.
- **Policy 2.** Various methods of protecting, and enhancing the scenic qualities of land and uses within corridor boundaries must be devised and carried out.
- **Policy 3.** Standards for corridor protection should parallel those established by State Scenic Highway Law (1963) and outlined in State guidelines.

Implementation Measures

- **Implementation Measure A.** Caltrans has the responsibility for coordinating Scenic Highway programs. Caltrans will not act on programs until the local government requests aid from that agency. Caltrans will coordinate and conduct two studies. Caltrans calls the studies “Corridor Survey” and “Highway Facility Study.” Results of these two studies will be presented in a comprehensive Scenic Highway Report. The Report will contain maps, photographs, and other documentation showing:

1. Suggested Scenic Highway Corridor boundaries.
2. Scenic elements within the suggested corridor.
3. The relationship of the right-of-way to its environment.
4. Suggested preservation of the scenic and aesthetic elements of the visual environment.
5. Any proposed realignments of the route, if known.
6. Potential locations of roadside rests, vista points, and areas for public or commercial information sites.

California gives the local jurisdiction the approved Caltrans' report to use in preparation of a local scenic corridor protection and enhancement plan and program.

- **Implementation Measure B.** Kern County Planning and Natural Resources Department shall prepare as needed, with aid from Caltrans, Scenic Route Corridor Specific Plans. These specific plans shall include circulation, land use, open space and conservation plan maps and appropriate implementation measures. The plan should provide for the protection and enhancement of the existing natural and man-made scenic resources for the routes California includes in the State Master Plan of Scenic Highways. The scenic corridor boundaries and Scenic Route Corridor Specific Plan, identifying the land use regulation measures used within the corridor, shall be adopted by the Board of Supervisors. Upon adoption of the plan, the County shall apply to the District Director of Transportation for official State designation as an Official State Scenic Highway.
- **Implementation Measure C.** County roads may be set as official County Scenic Highways by the Board of Supervisors after the State Director of Transportation has found that all requirements are met. All standards and procedures prescribed for State Scenic Highways shall apply to County Scenic Highways. The Department of Transportation will not undertake a Scenic Highway Study but will be available upon request by the local jurisdiction to consult about the technical aspects of this program. The Planning Department is responsible for doing a case study.
- **Implementation Measure D.** The County has adopted a Scenic Corridor (SC) Combining District to designate areas which contain unique visual and scenic resources as viewed from a major highway or freeway and for the regulation of off-site advertising signs, where the siting of such signs need to be reviewed on a case-by-case basis to safeguard the scenic qualities of the natural environment and the visual qualities of primary entranceways into the County.

Cameron Canyon Specific Plan

The project would be subject to applicable policies and implementation standards of the Circulation Element of the *Cameron Canyon Specific Plan*. The Circulation Element includes the following policies and implementation measures related to aesthetics and visual resources that would apply to the project.

Section VII. Circulation Element

Policies

- **Policy 9.** Highway 58 is designated as an eligible Scenic Highway Route and, as such, should be afforded maximum protection from visual blight.

Implementation Standards

- **Implementation Standard 9.** State Highway Route 58 through the plan area restricts signage to State Highway informational signage only, as well as the paralleling Cameron Canyon Roadway, for a distance of not less than 660 feet southerly of said State Highway Route 58 unless signage is for on-premise use only.

Kern County Ordinance

Title 19 – Zoning Code

Chapter 19.80 – Special Development Standards

Section 19.80.030 – Development and performance standards—Commercial and industrial districts

All development in the CO, C-1, C-2, CH, M-1, M-2, and M-3 districts, and, where specified, in the A and NR districts, shall comply with the following standards:

- J. All exterior lighting shall be directed away from adjacent properties and roads. When lighting would be visible from a residential district or adjacent public roads, the lighting standards shall be equipped with glare shields or baffles and shall not exceed forty (40) feet in height above grade. Lighting within areas containing the H (airport approach height combining) district, or otherwise located within one-half (½) mile of any public airport or public use airstrip, shall additionally be developed and maintained as required by subsection (A) of Section 19.76.125 of this title. Light fixtures shall be maintained in sound operating condition at all times.

Section 19.81 – Outdoor Lighting “Dark Sky Ordinance”

Section 19.81.040 – General requirements

The following standards shall apply to all outdoor lighting fixtures subject to this ordinance.

- A. *Shielding.* All outdoor lighting fixtures which utilize one hundred (100) watts or more (based on an incandescent bulb), or emit one thousand six hundred (1,600) lumens or more per fixture, shall be fully shielded per the definition listed in this chapter, unless the fixture is exempted by this chapter. All floodlights which utilize less than one hundred (100) watts per fixture must be at least partially shielded to reduce light spillover onto adjacent properties. Additionally, the light source (bulb) within all lighting fixtures shall be oriented downward to prevent direct uplighting, except as permitted by Section 19.81.040(F).

4.1.4 Impacts and Mitigation Measures

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

Methodology

Potential impacts to visual resources near the project site were evaluated based on the following criteria:

- baseline conditions visual quality and scenic attributes of the landscape;
- location of sensitive receptors in the landscape;
- assumptions about receptors' concern for scenery and sensitivity to changes in the landscape;
- the magnitude of visual changes in the landscape that would be brought about by the project;
- compliance with State, County, and local policies for visual resources; and
- the significance threshold questions in relation to aesthetics contained in Kern County's CEQA Implementation Document and Environmental Checklist.

Changes to the visual character of the project site resulting from vested mining operations (e.g., enlarged and new mine pits, overburden stockpiles, mine access roads) are not impacts of the project. Thus, for this analysis the baseline condition is not the existing condition and, instead, is the anticipated future project site condition at the completion of vested mining pursuant to the mine plan discussed in **Chapter 3** and illustrated on **Figure 3-7, Proposed Maximum Extent of Excavation**, in **Chapter 3**. Aesthetic impacts of reclamation are assessed against the future mined condition baseline to determine the project's visual impacts. As discussed above in the *Baseline Conditions* subsection of **Section 4.1.2, Environmental Setting**, visual simulations were prepared to demonstrate the anticipated visual character of the project site as viewed from offsite KOPs under future baseline conditions, as presented in **Figures 4.1-3, 4.1-6, 4.1-9, 4.1-12, and 4.1-15**, below. Photographic simulations are provided in this section to present anticipated changes to the visual character of the site resulting from the project (**Figures 4.1-4, 4.1-7, 4.1-10, 4.1-13, and 4.1-16**).

Project Site Visibility

Oak Creek Road and Tehachapi Willow Springs Road are the primary public viewing locations of the project site; however, views of the site from more distant publicly accessible areas are also available. Additionally, the Pacific Crest Trail, which passes to the north and west of the project site, also provides views of the site.

Analysis Methodology

The findings of this study are based on assessment of site character changes using photo simulations created from photos taken in May 2021, along with observations and considerations of site conditions and surrounding viewsheds in April 2024. Resource inventories were conducted both through field investigation as well as review of aerial photography. Existing visual resources and site conditions were photographed and recorded. Assessment of project elements is based on project design, including digital topographic data, plan and profile view drawings of project features, and descriptions of the project as proposed by the project proponent and as presented in **Chapter 3, *Project Description***, of this EIR. Planning documents and approved studies relevant to the project and the surrounding area were referenced to gain an understanding of the project, applicable regulatory requirements, and established aesthetic values.

The project site was viewed from representative potential public view locations throughout the surrounding area. Representative viewpoints were identified for further analysis based on dominance of the site within the view, duration of views, and expected sensitivity of the viewer group. Of those potential viewpoints, Kern County selected five key observation points (KOPs) for photo simulations that would best illustrate the visual changes resulting from the project (**Figure 4.1-1, *Key Observation Points Map***).

Photographs were taken to represent typical site views and viewing conditions, generally consistent with natural human perception. Accuracy of the visual simulations was ensured by analyzing the known dimensions and elevations of existing site features and landform, combined with three-dimensional topographic mapping analysis using computer aided drafting (CAD) software, and empirical field observation.

Photo simulations were prepared to portray potential project visibility, to present anticipated future baseline conditions, and anticipated project conditions to provide a comparison of the project against baseline conditions. Photo simulations of anticipated baseline conditions and photo simulations of the proposed project from the five KOPs are shown below at **Impact 4.1-3** (see **Figures 4.1-2 through 4.1-16**).

Project Assumptions and Photo simulations

For the purpose of the baseline conditions photo simulations, vested mining of the project site is assumed to be completed in accordance with the mine plan illustrated on **Figure 3-7, *Proposed Maximum Extent of Excavation***, in **Chapter 3**. Mine disturbances and stockpiles will be present, and final contouring and revegetation will not yet have been performed as these activities would be completed as part of site reclamation under the proposed project. Additionally, under baseline conditions the cement plant and processing facilities would be demolished and removal of these facilities would be completed as part of site reclamation under the proposed project.

For the purposes of the proposed project photo simulations, final contouring and revegetation is assumed to have been completed with vegetation reflecting approximately 5 years of growth. The cement plant and processing facilities are assumed to have been demolished and removed from the site.

Visual Quality Ratings

This analysis includes the “Scenic Quality Rating Criteria” method developed by the U.S. Bureau of Land Management (BLM) as a methodology for assessing the various landscape elements that comprise visual quality to be quantified and rated with a minimum of ambiguity or subjectivity (BLM 1986).

According to this method, visual quality is rated according to the presence and characteristics of seven key components of the landscape, which include landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications:

1. The **landform** component of the visual quality rating criteria considers the fact that topography becomes more interesting visually as it gets steeper or more massive, or more severely or universally sculptured. Outstanding landforms may be monumental (as found in Yosemite Valley), or they may be exceedingly artistic and subtle (such as certain badlands, pinnacles, arches, and other extraordinary formations).
2. The **vegetation** component of the rating criteria gives primary consideration to the variety of patterns, forms, and textures created by plant life. Short-lived displays are given consideration when they are known to be recurring or spectacular. Consideration is also given to smaller scale vegetation features that add striking and intriguing detail elements to the landscape (e.g., gnarled or wind beaten trees, Joshua trees, etc.).
3. The **water** component of the rating criteria recognizes that visual quality is largely tied to the presence of water in scenery, as it is that ingredient that adds movement or serenity to a scene. The degree to which water dominates the scene is the primary consideration in selecting the rating score for the water component.
4. The **color** component of the visual quality rating criteria considers the overall color(s) of the basic components of the landscape (e.g., soil, rock, vegetation, etc.). Key factors that are used when rating the color of scenery are variety, contrast, and harmony.
5. The **adjacent scenery** component of the rating criteria considers the degree to which scenery outside the view being rated enhances the overall impression of the scenery under evaluation. The distance of influence for adjacent scenery normally ranges from 0 to 5 miles, depending upon the characteristics of the topography, the vegetation cover, and other such factors. This factor is generally applied to views that would normally rate very low in score, but the influence of the adjacent high visual quality would enhance the visual quality and raise the score.
6. The **scarcity** component of the visual quality rating criteria provides an opportunity to give added importance to one or all of the scenic features that appear to be relatively unique or rare within a region. There may also be cases where a separate evaluation of each of the key factors does not give a true picture of the overall scenic quality of an area. Often, it is a number of not so spectacular elements in the proper combination that produces the most pleasing and memorable scenery—the scarcity factor can be used to recognize this type of area and give it the added emphasis it should have.
7. The cultural modifications component of the visual quality rating criteria considers any man-made modifications to the landform, water, vegetation, and/or the addition of manmade structures. Depending on their character, these cultural modifications may

detract from the scenery in the form of a negative intrusion or they may complement and improve the scenic quality of a view.

Based on the above criteria, views are rated numerically and a total score of visual quality is tabulated. Based on the BLM's rating system, there are a total of 32 points possible. Views that score a total of 19 points or more are typically considered very high in visual quality. Views that score a total of 15 to 19 points are typically considered to have a high level of visual quality. Views that score a total of 12 to 15 points are typically considered to have an above average level of visual quality. Finally, views that score a total of 11 points or less are typically considered to have average visual quality. Point values associated with the various criteria are described in **Table 4.1-1, Visual Quality Rating System**.

Table 4.1-1 Visual Quality Rating System

Key Factors	Rating Criteria and Score		
Landform	5 Points: High vertical relief as expressed in prominent cliffs, spires, or massive rock outcrops, or severe surface variation or highly eroded formations including major badlands or dune systems; or detail features dominant and exceptionally striking and intriguing such as glaciers.	3 Points: Steep canyons, mesas, buttes, cinder cones, and drumlins; or interesting erosional patterns or variety in size and shape of landforms; or detail features which are interesting though not dominant or exceptional.	1 Point: Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features.
Vegetation	5 Points: A variety of vegetative types as expressed in interesting forms, textures, and patterns.	3 Points: Some variety of vegetation, but only one or two major types.	1 Point: Little or no variety or contrast in vegetation.
Water	5 Points: Clear and clean appearing, still, or cascading white water, any of which are a dominant factor in the landscape.	3 Points: Flowing, or still, but not dominant in the landscape.	1 Point: Absent, or present but not noticeable.
Color	5 Points: Rich color combinations, variety or vivid color; or pleasing contrasts in the soil, rock, vegetation, water, or snow fields.	3 Points: Some intensity or variety in colors and contrast of the soil, rock, and vegetation, but not a dominant scenic element.	1 Point: Subtle color variations, contrast, or interest; generally mute tones.
Influence of Adjacent Scenery	5 Points: Adjacent scenery greatly enhances visual quality.	3 Points: Adjacent scenery moderately enhances overall visual quality.	1 Point: Adjacent scenery has little or no influence on overall visual quality.
Scarcity	5 Points: One of a kind, or unusually memorable, or very rare within region. Consistent chance for exceptional wildlife or wildflower viewing, etc.	3 Points: Distinctive, though somewhat similar to others within the region.	1 Point: Interesting within its setting but fairly common within the region.

Table 4.1-1 Visual Quality Rating System

Key Factors	Rating Criteria and Score		
Cultural Modifications	2 Points: Modifications add favorably to visual variety while promoting visual harmony.	0 Points: Modifications add little or no visual variety to the area and introduce no discordant elements.	-4 Points: Modifications add variety but are very discordant and promote strong disharmony.
	Total Score for All Categories: Out of 32		

Source: BLM 1986.

An important aspect of this evaluation methodology is that views with the most variety and most harmonious composition have the greatest scenic value. Another important concept is that manmade features within a landscape do not necessarily detract from the scenic value. In fact, certain manmade features that complement the natural landscape may actually enhance the visual quality. In making this determination, it is therefore important to assess project effects relative to the visual character of the project setting. Visual character is qualitatively defined by four primary components: form, line, color, and texture.

Projects that create a high level of contrast to the existing visual character of a project setting are more likely to generate adverse visual impacts due to visual incompatibility. Conversely, projects that create a low level of contrast to the existing visual character are less likely to generate adverse visual impacts due to inherent visual compatibility. On this basis, project modifications are quantified and evaluated for impact assessment purposes.

By comparing the difference in visual quality ratings from the baseline visual condition to post-project visual condition, the nature and severity of project-related visual impacts can be quantified. This analysis tool is used to gain a more detailed understanding of the specific characteristics that affect the visual quality of the site in comparison of baseline and post-project conditions. The results of the Visual Quality Rating Analysis are incorporated into the CEQA thresholds findings discussed below and is used for the analysis in **Impact 4.1-3**, below.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect related to aesthetics. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to aesthetics if it would:

- a. Have a substantial adverse effect on a scenic vista;
- b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized

area, it would conflict with applicable zoning and other regulations governing scenic quality; or

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

In addition to the State CEQA *Guidelines*, the Kern County Environmental Information Form (Form 108) questionnaire includes a checklist item pertaining to potential visual impacts. Item 22 asks whether a project would potentially cause a “change in scenic views or vistas from existing residential areas or public lands or roads.” Analysis of this item is included in **Impact 4.1-1**.

Project Impacts

Impact 4.1-1: The project would have a substantial adverse effect on a scenic vista.

A substantial adverse impact to a scenic vista would occur if the project would significantly degrade the scenic landscape as viewed from public roads or from other public areas that are considered to be a scenic vista. The degree of potential impact on scenic vistas varies with factors such as viewing distance, duration, viewer sensitivity, and the visual context of the surrounding area. Scenic vistas are often panoramic views that have high-quality compositional and picturesque value. Although the site is visible from public roads and other areas, the site is not considered to be located within the viewshed of a scenic vista. Therefore, the project would not adversely affect a scenic vista and this impact is considered less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.1-2: The project would substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a scenic highway.

There are no designated scenic highways within the project vicinity. The segment of SR-58 between Mojave and Barstow is eligible for designation as a State scenic highway, but it has not been formally designated (Caltrans 2022). Additionally, the segment of State Route (SR)-14 between Highway 395 and SR-58 is eligible for designation as a State scenic highway, but it has not been formally designated (Caltrans 2022). These roadway segments are over 7 miles east of the project site. Due to this distance as well as intervening topography/structures, the project’s reclamation activities would not be visible along these roadway segments and the project would not have the potential to damage scenic resources within a scenic highway, and as such this impact is considered less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.1-3: The project would substantially degrade the existing visual character or quality of public views of the site and its surroundings.

Project-related actions would be considered to have a significant impact on the visual character of the site if they altered the area in a way that substantially changed, detracted from, or degraded the visual quality of the site or was inconsistent with community policies regarding visual character. The degree to which that change reflects documented community values and meets viewers' aesthetic expectations is the basis for determining levels of significance. Visual contrast and compatibility may be used as a measure of the potential impact that the project may have on the visual quality of the site. If a strong contrast occurred where project features or activities attract attention and dominate the landscape setting, this would be considered a potentially significant impact on visual character or quality of the site.

Project components that are not subordinate to the landscape setting could result in a significant change in the composition of the landscape. Consideration of potential significance includes analysis of visual character elements such as land use and intensity, visual integrity of the landscape type, and other factors.

As discussed above, the anticipated visual character of the site following the completion of vested mining constitutes the baseline condition against which visual changes associated with reclamation is compared, to assess visual impacts of the project. Vested mining operations will enlarge existing mine pits within the project site and will develop new mine pits within the project site. Additionally, existing stockpiles will be enlarged and new stockpiles will be developed during vested mining operations, mine access roads will be maintained and developed, and other mine-related disturbances will occur within the site. These disturbances and site modifications will result in the baseline condition to which visual changes of the proposed project are compared, to assess impacts.

In order to illustrate anticipated future baseline conditions and to illustrate the degree of anticipated change that would result from the project as compared to baseline conditions, photographs of existing conditions were taken from the five representative viewpoints (KOPs) identified in **Figure 4.1-1, Key Observation Points Map**, and two photographic simulations were prepared for each location to represent anticipated views from these locations with: (1) baseline conditions in which the project site consists of mine areas fully excavated and overburden stockpiles fully developed but reclamation has not commenced, and (2) the project with the proposed reclamation implemented. **Figures 4.1-3, 4.1-6, 4.1-9, 4.1-12, and 4.1-15** present baseline photo simulations and **Figures 4.1-4, 4.1-7, 4.1-10, 4.1-13, and 4.1-16** present proposed project simulations for each KOP. A discussion of each KOP and changes anticipated as a result of the project is provided below.

- **KOP-1** is located along Oak Creek Road near the existing CalPortland facility entrance facing west as shown on **Figure 4.1-1**. As shown in **Figure 4.1-3, KOP-1: Baseline Conditions (Vested Mining Completed)**, following the completion of vested mining

operations exposed excavation pits/highwalls, overburden stockpiles, and cement plant facilities will be visible from this viewpoint under baseline conditions. As shown in **Figure 4.1-4, KOP-1: Proposed Project (Reclamation Completed)**, once reclamation and revegetation of the project site is complete, disturbed lands on the project site would be less apparent and would visually blend with adjacent lands resulting in a *beneficial* impact of the proposed project.

- **KOP-2** is located near the intersection of Oak Creek Road and Tehachapi Willow Springs Road facing southeast as shown on **Figure 4.1-1**. As shown in **Figure 4.1-6, KOP-2: Baseline Conditions (Vested Mining Completed)**, following the completion of vested mining operations an overburden stockpile with exposed barren slopes will be visually dominant from this viewpoint under baseline conditions. As shown in **Figure 4.1-7, KOP-2: Proposed Project (Reclamation Completed)**, once reclamation and revegetation of this stockpile is complete, the stockpile would visually blend with adjacent lands resulting in a *beneficial* impact of the proposed project.
- **KOP-3** is located along Tehachapi Willow Springs Road north and west of the project site facing east as shown on **Figure 4.1-1**. As shown in **Figure 4.1-9, KOP-3: Baseline Conditions (Vested Mining Completed)**, following the completion of vested mining operations overburden stockpiles with exposed barren slopes will be visible from this viewpoint. As shown in **Figure 4.1-10, KOP-3: Proposed Project (Reclamation Completed)**, once reclamation and revegetation of these stockpiles is complete, the stockpiles would visually blend with adjacent lands resulting in a *beneficial* impact of the proposed project.
- **KOP-4** is located along Tehachapi Willow Springs Road south of the project site facing north as shown on **Figure 4.1-1**. As shown in **Figure 4.1-12, KOP-4: Baseline Conditions (Vested Mining Completed)**, following the completion of vested mining operations exposed excavation pits/highwalls and overburden stockpiles will be visible from this viewpoint under baseline conditions. As shown in **Figure 4.1-13, KOP-4: Proposed Project (Reclamation Completed)**, once reclamation and revegetation of the project site is complete, disturbed lands on the project site would be less apparent and would visually blend with adjacent lands resulting in a *beneficial* impact of the proposed project.
- **KOP-5** is located along Tehachapi Willow Springs Road approximately 4.2 miles south of the project site facing northwest toward the site as shown on **Figure 4.1-1**. As shown in **Figure 4.1-15, KOP-5: Baseline Conditions (Vested Mining Completed)**, following the completion of vested mining operations exposed excavation pits/highwalls and overburden stockpiles will be visible and compose much of the ridgeline horizon views from this viewpoint under baseline conditions. As shown in **Figure 4.1-16, KOP-5: Proposed Project (Reclamation Completed)**, once reclamation and revegetation of the project site is complete, disturbed lands on the project site would be less apparent and would visually blend with adjacent lands resulting in a *beneficial* impact of the proposed project.

Consistent with the Visual Quality Rating methodology described in the Methodology section above and in consideration of the five KOPs in combination, views of the project site under

baseline conditions and post-project conditions have been rated numerically and shown in **Table 4.1-2, Visual Quality Rating Analysis**.

Table 4.1-2 Visual Quality Rating Analysis

Rating Feature	Baseline Condition	Proposed Project
Landform	2 Points: The mined site will reflect artificial, engineered landforms (e.g., quarry slopes and overburden stockpiles) visually inconsistent with the adjacent natural topography. The close proximity of the project site to Oak Creek Road and Tehachapi Willow Springs Road and orientation of slopes providing visibility of the site in views from these public roads will increase the noticeability of the altered landforms.	2 Points: Although the project (reclamation) would include some final contouring, much of the landform created during vested mining operations and that would exist under baseline conditions would be unaltered by project reclamation.
Vegetation	1 Point: Disturbed areas including quarry slopes and overburden stockpiles will have little or no vegetation cover.	3 Points: Reclamation of the site would include revegetation of mined areas with native species, stockpiles, and other disturbed areas. Although vegetation under reclaimed conditions may not be fully consistent with vegetation on adjacent areas, vegetation cover, density and diversity would be substantially more than under baseline conditions.
Water	1 Point: Intermittent surface flow in drainages within and downstream of the project site may be interrupted under baseline conditions. Pit B may contain surface water, but is not expected to be visible from surrounding areas.	2 Point: Reclamation of the site may restore intermittent flow in portions of drainages within and downstream of the site potentially increasing and not reducing the visibility of water in the vicinity. Surface water that may be present in Pit B under baseline conditions would not be affected by reclamation.
Color	1 Point: Exposed surfaces with limited or no vegetation would create light-colored quarry faces and stockpile slopes contrasting with adjacent areas influenced by vegetation color.	3 Points: Reclamation of the site would include revegetation of mined areas with native species, stockpiles and other disturbed areas resulting in coloring more similar to adjacent areas and reducing the color contrast of baseline conditions. Although vegetation under reclaimed conditions may not be fully consistent with vegetation on adjacent areas, vegetation cover, density and diversity would be substantially more than under baseline conditions.

Table 4.1-2 Visual Quality Rating Analysis

Rating Feature	Baseline Condition	Proposed Project
Influence of Adjacent Scenery	1 Point: Uniform benched quarry faces and stockpile slopes with limited or no vegetation will contrast with adjacent areas.	2 Points: Reclamation of the site would result in vegetation visually more similar to adjacent areas.
Scarcity	1 Point: Mined conditions may be considered to offer an interesting or unique view, but are rated low in terms of providing exceptional view quality.	1 Point: Reclaimed conditions would provide improved view quality as compared to baseline conditions as vegetation cover, density and diversity would be substantially more than under baseline conditions. Nonetheless, while the reclaimed condition of the site may be considered interesting within its setting, it would be fairly common within the region.
Cultural Modifications	-3 Points: Baseline mined conditions, quarry and stockpile visibility, and the cement plant and processing facilities will be discordant and disharmonious with adjacent areas.	0 Points: Revegetation of the site and removal of the cement plant and processing facilities would reduce cultural modifications as compared to baseline conditions. Reclamation to open space would reduce but not eliminate the visibility of baseline condition landform modifications (e.g., quarry walls and overburden stockpiles).
Total Score	4 out of 32	13 of 32

The Visual Quality Ratings in **Table 4.1-2, Visual Quality Rating Analysis**, above, show that the baseline visual quality rating is 4 and the proposed project rating is 13. Review of the ratings indicate that the factor most affecting the visual quality are improvements from revegetation of areas that would be disturbed under baseline conditions, thereby resulting in a *beneficial* visual impact.

Viewer sensitivity to changes in the visual environment in the project vicinity is expected to be moderate. Viewer sensitivity is increased by the project site's visibility from areas to the south and travelers on Oak Creek Road and Tehachapi Willow Springs Road. In addition, the rural and open space character of the site and setting may increase sensitivity to visual alterations that contrast with the scenic context, which suggests that the visual improvements of the project as compared to baseline conditions would result in a *beneficial* visual impact.

KEY OBSERVATION POINT 1



Figure 4.1-2
KOP-1: Existing Conditions



Figure 4.1-3
KOP-1: Baseline Conditions (Vested Mining Completed)



Figure 4.1-4
KOP-1: Proposed Project (Reclamation Completed)

KEY OBSERVATION POINT 2



Figure 4.1-5
KOP-2: Existing Conditions



Figure 4.1-6
KOP-2: Baseline Conditions (Vested Mining Completed)



Figure 4.1-7
KOP-2: Proposed Project (Reclamation Completed)

KEY OBSERVATION POINT 3



Figure 4.1-8
KOP-3: Existing Conditions



Figure 4.1-9
KOP-3: Baseline Conditions (Vested Mining Completed)



Figure 4.1-10
KOP-3: Proposed Project (Reclamation Completed)

KEY OBSERVATION POINT 4



Figure 4.1-11
KOP-4: Existing Conditions

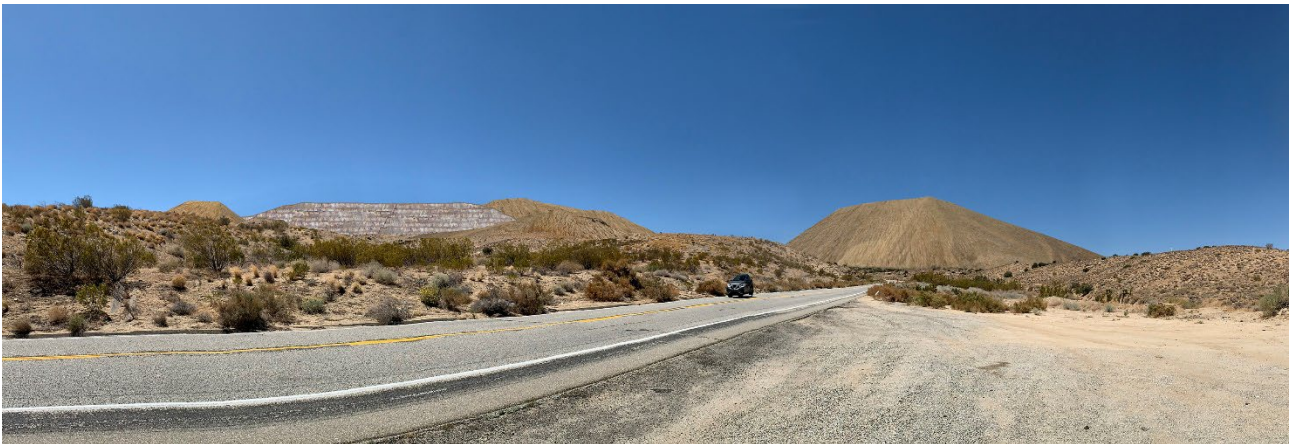


Figure 4.1-12
KOP-4: Baseline Conditions (Vested Mining Completed)

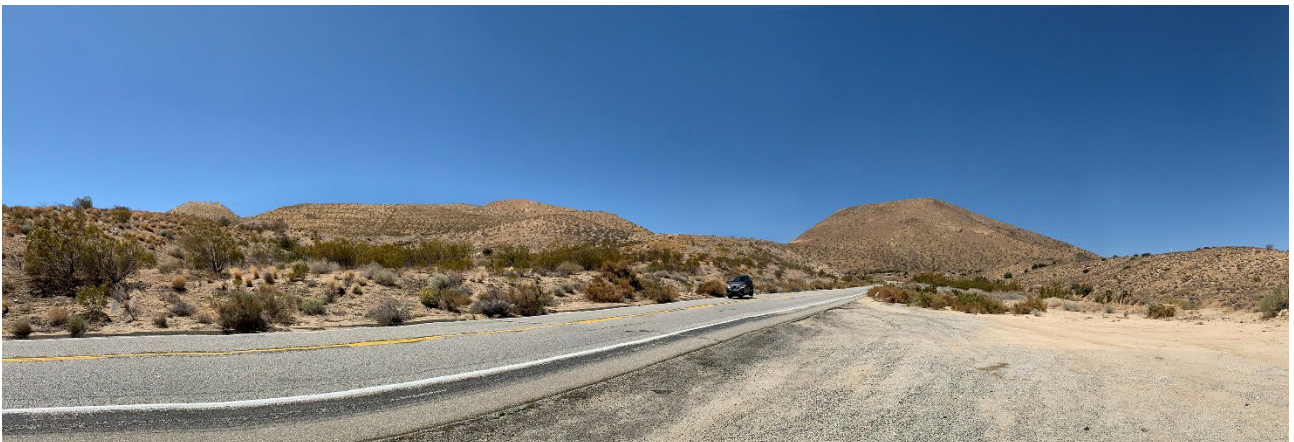


Figure 4.1-13
KOP-4: Proposed Project (Reclamation Completed)

KEY OBSERVATION POINT 5



Figure 4.1-14
KOP-5: Existing Conditions



Figure 4.1-15
KOP-5: Baseline Conditions (Vested Mining Completed)



Figure 4.1-16
KOP-5: Proposed Project (Reclamation Completed)

The topography of the site following completion of vested mining would differ from the existing conditions of the site and surrounding unmined topography. The reclamation of the site following completion of vested mining would not substantially alter the topography of the mined baseline condition, but would require earthmoving and other activities including recontouring, stabilizing, topsoil placement, revegetation, and monitoring of final slopes and disturbed mining and stockpile areas, as well as reclamation of roads not required for post-reclamation access and security, removal of ancillary equipment and facilities, and removal of the processing and cement plants and related facilities. Reclamation activities (notwithstanding revegetation monitoring) at the site are expected to be completed in approximately two years (completed in the year 2224) following cessation of mining operations in 2222, with revegetation monitoring anticipated to continue for an additional 5 years beyond 2222 (ending in 2227).

Project reclamation activities would be intermittently visible from offsite locations depending on the location of certain activities. Demolition activities and materials movement from the site, onsite haul truck and earthmoving equipment operation, and hydroseeding and other revegetation activities would be intermittently visible from adjacent areas. These activities would be temporary and of short duration in any one area and are not considered to represent a substantial degradation of visual quality as compared to the mined condition baseline.

During reclamation activities, the potential for accumulation of trash or other debris visible from offsite areas is considered a potentially significant visual impact of the project. Mitigation Measure **MM 4.1-1** would reduce potential impacts associated with trash and debris accumulation and would reduce this visual impact to less than significant.

Mitigation Measures

MM 4.1-1 At least 30 days prior to the commencement of reclamation activities, the project proponent/operator shall submit a Maintenance and Trash Abatement/Pest Management Program to the Kern County Planning and Natural Resources Department. The program shall include, but not be limited to, the following:

- a. The project proponent/operator shall clear debris from the project area at least twice per year.
- b. Trash and food items shall be contained in closed containers and removed at least once per week to reduce the attractiveness to opportunistic predators, such as common ravens, coyotes, and feral dogs.
- c. The project proponent/operator shall erect signs with contact information for the project proponent/operator's maintenance staff at regular intervals along the site boundary, as required by the Kern County Planning and Natural Resources Department. Maintenance staff shall respond within 2 weeks to resident requests for additional cleanup of debris. Correspondence with such requests and responses shall be submitted to the Kern County Planning and Natural Resources Department.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.1-1**, **Impact 4.1-3** would be less than significant.

Impact 4.1-4: The project would create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.

The project would result in a significant impact if viewers from public roads or residences were subjected to a substantial amount of new point-source lighting visibility at night, or if the collective illumination of the project resulted in a noticeable spill-over effect into the nighttime sky, increasing the ambient light over the region.

For ongoing vested mining operations and cement plant and processing facilities, temporary lighting is used for nighttime operations as needed and facilities are sufficiently illuminated during hours of darkness. Project reclamation activities would occur primarily during daylight hours, however, there is a potential that some reclamation activities may occur during dusk or nighttime hours. Although not anticipated, if reclamation activities occur during the time of year when daylight hours are shorter, or during any nighttime hours, some lighting may be required to provide a safe working environment.

Lighting use within certain areas during reclamation would have the potential to be visible from surrounding areas including segments of Oak Creek Road and Tehachapi Willow Springs Road, area residences, and other area land uses. Although direct light spill to offsite properties is not anticipated, the potential for unshielded lighting to generate “light pollution” in the area during reclamation is considered a potentially significant impact.

Mitigation Measure **MM 4.1-2** would require the project proponent to comply with the County’s Dark Skies Ordinance (Chapter 19.81 of the Kern County Zoning Ordinance) (Kern County 2020) and Mitigation Measure **MM 4.1-3** would require the project proponent to prepare and submit an outdoor lighting plan to the Kern County Planning and Natural Resources Department for review and approval. Implementation of Mitigation Measures **MM 4.1-2** and **MM 4.1-3** would reduce this potential impact to less than significant.

Mitigation Measures

MM 4.1-2 Project facility lighting shall continuously comply with the applicable provisions of the Dark Skies Ordinance (Kern County Zoning Ordinance Chapter 19.81) and shall be designed to provide the minimum illumination needed to achieve safety and security objectives. All lighting shall be directed downward and shielded to focus illumination on the desired areas only and avoid light trespass into adjacent areas.

MM 4.1-3 Prior to commencement of reclamation activities as authorized by this approval, the project proponent/operator shall submit an Outdoor Lighting Plan to the Kern County Planning and Natural Resources Department in accordance with Kern County Zoning Ordinance Chapter 19.81 (Outdoor Lighting “Dark Skies Ordinance”). Due to the fact that reclamation may occur

in different locations throughout the site over the life of the project, the approved Outdoor Lighting Plan is subject to change during project operations to ensure overall impacts to adjacent parcels are reduced to the extent feasible.

The project proponent/operator shall establish a Lighting Complaint Coordinator for the proposed project. The Lighting Complaint Coordinator shall be responsible for responding to any complaints about light or glare from the project. The Lighting Complaint Coordinator shall determine the cause of the complaint and shall be required to implement reasonable measures to resolve the complaint. Lighting complaints and responses shall be submitted to the Kern County Planning and Natural Resources Department. Contact information for the Lighting Complaint Coordinator shall be submitted to the Kern County Planning and Natural Resources Department prior to commencement of operations as authorized by this approval.

A sign, legible at a distance of 50 feet, shall be posted at the intersection of the project's Primary Access Road with Oak Creek Road. The sign shall state a Reclamation Plan has been approved for the site and include a telephone number where complaints can be registered with the Complaint Coordinator. Documentation that the sign has been posted shall be provided to the Kern County Planning and Natural Resources Department.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.1-2** and **MM 4.1-3**, **Impact 4.1-4** would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

The discussion of cumulative impacts relates to the potential for the project to contribute to an overall change in visual quality from surrounding public viewing areas, taking into consideration existing as well as proposed development. The project site's visibility from Oak Creek Road, Tehachapi Willow Springs Road, and other areas creates the potential to influence the aesthetic quality and character of the area. This change in visual character, along with other recent and proposed projects, could potentially contribute to a cumulatively considerable change in the visual character of the project region.

Impact 4.1-5: The project would contribute to cumulative aesthetic and visual resource impacts.

Section 3.7, *Cumulative Effects Overview*, of this EIR discusses cumulative projects near the project (**Table 3-15, *Cumulative Projects List***, in **Chapter 3, *Project Description***, lists specific projects considered in the cumulative impact analysis). As discussed above, reclamation of the mined site would result in beneficial impacts associated with improvements to the visual character of the project site as compared to baseline conditions. Reclamation activities may be temporarily visible from some areas, but are considered a less than significant visual impact and would not substantially contribute to cumulative visual impacts. The visual impact associated with potential trash and other debris accumulation during reclamation would be reduced to less than significant with implementation of Mitigation Measure **MM 4.1-1**.

Development of other projects within 6 miles of the project site would result in varying degrees of changes in the visual character of the project region. The beneficial visual impact of improved site visual character associated with project reclamation would not contribute to adverse visual impacts in combination with existing, proposed, approved, and reasonably foreseeable development and is therefore considered to not have the potential to result in a substantial contribution to cumulative changes in the visual character of the project region. Therefore, with implementation of Mitigation Measure **MM 4.1-1**, the project's cumulative visual impact associated with change in visual character is considered less than significant.

The cumulative scenario for the aesthetic impacts from light and glare includes potential future developments and sources of adverse visual changes and lighting. With implementation of Mitigation Measures **MM 4.1-2** and **4.1-3**, the project impacts associated with lighting would be reduced to less than significant. Other projects within 6 miles of the proposed project site (as referenced in **Table 3-15**, *Cumulative Projects List*, in **Chapter 3**, *Project Description*) would also be subject to County requirements for minimizing light and glare; thus, with implementation of the proposed mitigation measures, the proposed project's incremental contribution to cumulative light and glare impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures **MM 4.1-1** through **MM 4.1-3**.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.1-1**, the project's contribution to cumulative impacts associated with change in visual character would be less than significant.

With implementation of Mitigation Measures **MM 4.1-2** and **4.1-3**, the project's contribution to cumulative impacts associated with light and glare would be less than significant.

Section 4.2

Agricultural and Forestry Resources

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Agricultural and Forestry Resources

4.2.1 Introduction

This section of the EIR describes the affected environment and regulatory settings for agricultural and forestry resources for the project. It also describes the potential impacts on agriculture and forestry resources that would result from the implementation of the project, and includes mitigation measures that would reduce these impacts, where applicable.

For this analysis of potential impacts associated with agricultural and forestry resources, baseline conditions are the anticipated future project site condition at the completion of vested mining pursuant to the mine plan discussed in **Chapter 3, Project Description**, and illustrated on **Figure 3-7, Proposed Maximum Extent of Excavation**, in **Chapter 3**. Impacts of the project (i.e., reclamation activities under the amended reclamation plan) are assessed against the future mined condition baseline.

4.2.2 Environmental Setting

This section discusses the existing conditions related to agricultural resources within the project site and project area.

Regional Setting

Kern County covers approximately 8,132 square miles (5,204,480 acres) (U.S. Census Bureau 2019). This total includes 567,282 acres of harvested agricultural land (Kern County Department of Agriculture and Measurement Standards 2024). Kern County has a long history of agricultural operations. According to the 2023 Kern County Agricultural Crop Report, agriculture in Kern County was worth approximately \$8.6 billion in 2023, which is an increase of 12 percent from the 2022 crop value. The top five commodities for 2023 were grapes, citrus, pistachios, almonds, and carrots, which made up more than \$5 billion (66 percent) of the County's total agricultural product value; the top twenty commodities make up more than 96 percent of the total value (Kern County Department of Agriculture and Measurement Standards 2024).

Kern County is growing rapidly and ranks high on the list of California counties with issues related to urbanization and the loss of farmland (DOC 2018). As shown in Table 4.2-1, 2018-2020 Land Use Conversion in Kern County, the California Department of Conservation (DOC) found that 6,868 net acres of Prime Farmland were converted to nonagricultural uses between 2018 and 2020 (DOC 2020). Approximately 5,256 net acres were converted from agricultural uses to urban/built-up land from 2018 to 2020 (DOC 2020). (Note: The various farmland designations are defined in **Section 4.2.3, Regulatory Setting**, below).

The project site is in the southeastern portion of unincorporated Kern County, situated on the western edge of the Mojave Desert and on the southeastern edge of the Tehachapi Mountains.

Although there are many areas zoned for agricultural uses in this area (including portions of the project site), land uses in this part of the County consist primarily of undeveloped native desert vegetation and scattered residences.

Table 4.2-1 2018-2020 Land Use Conversion in Kern County

Land Use Category	Total Acres 2018	Total Acres 2020	Net Acreage Changed
Prime Farmland	573,934	567,066	-6,868
Farmland of Statewide Importance	208,323	207,938	-385
Unique Farmland	91,770	93,710	1,940
Farmland of Local Importance	0	0	0
Important Farmland Subtotal:	874,027	868,714	-5,313
Grazing Land	1,854,639	1,857,259	2,620
Agricultural Land Subtotal:	2,728,666	2,725,973	-2,693
Urban and Built-up Land	165,085	170,341	5,256
Total Area Inventoried:	5,224,313	5,224,313	0

Source: DOC 2020.

Local Setting

The project site is located in unincorporated Kern County. The project site is bisected by Tehachapi Willow Springs Road, and the eastern portion of the site is bound on the north by Oak Creek Road and includes the existing mining operation and cement plant. The project site varies in topography, containing steep ridgelines, rocky hillsides, desert scrubland, rolling hills, and desert washes. Project site terrain west of Tehachapi Willow Springs Road includes a mountainous ridgeline transitioning into a lower ridgeline running generally from the northeast corner near the existing mined areas to the southwest. Rolling hills and valleys occur on either side of this portion of the ridgeline. Much of the site is composed of alluvial deposits and contains coarse-textured, well-drained soils developing from alluvium. Soil series which occur within the site include Cajon loamy sand, Cajon gravelly loamy sand, Cinco gravelly loamy sand, Garlock loamy sand, and Randsburg sandy loam. The diverse terrain of steep ridgelines, rocky hillsides, rolling hills, and flat desert scrubland supports a variety of habitats utilized by a diverse group of wildlife species. Most of the area consists of moderately steep to very steep ridgelines with rolling hills at the base of the mountainous terrain which support juniper woodlands and mixed woody scrub vegetation.

Farmland

According to the DOC, Division of Land Resource Protection's Important Farmland Maps (DOC 2025a), there are no agricultural lands designated Prime Farmland, Farmland of Statewide Importance, or Unique Farmland located within the project site. (Note: These various farmland designations are defined in **Section 4.2.3, Regulatory Setting**, below). Land within the project site is designated through the program as Grazing Land, Nonagricultural or Natural Vegetation, Urban and Built-up Land, and Vacant or Disturbed Land, as shown in **Figure 4.2-1, Important Farmland Mapping Program Designations**. There are no designated important farmlands located adjacent to or in the vicinity of the project site.

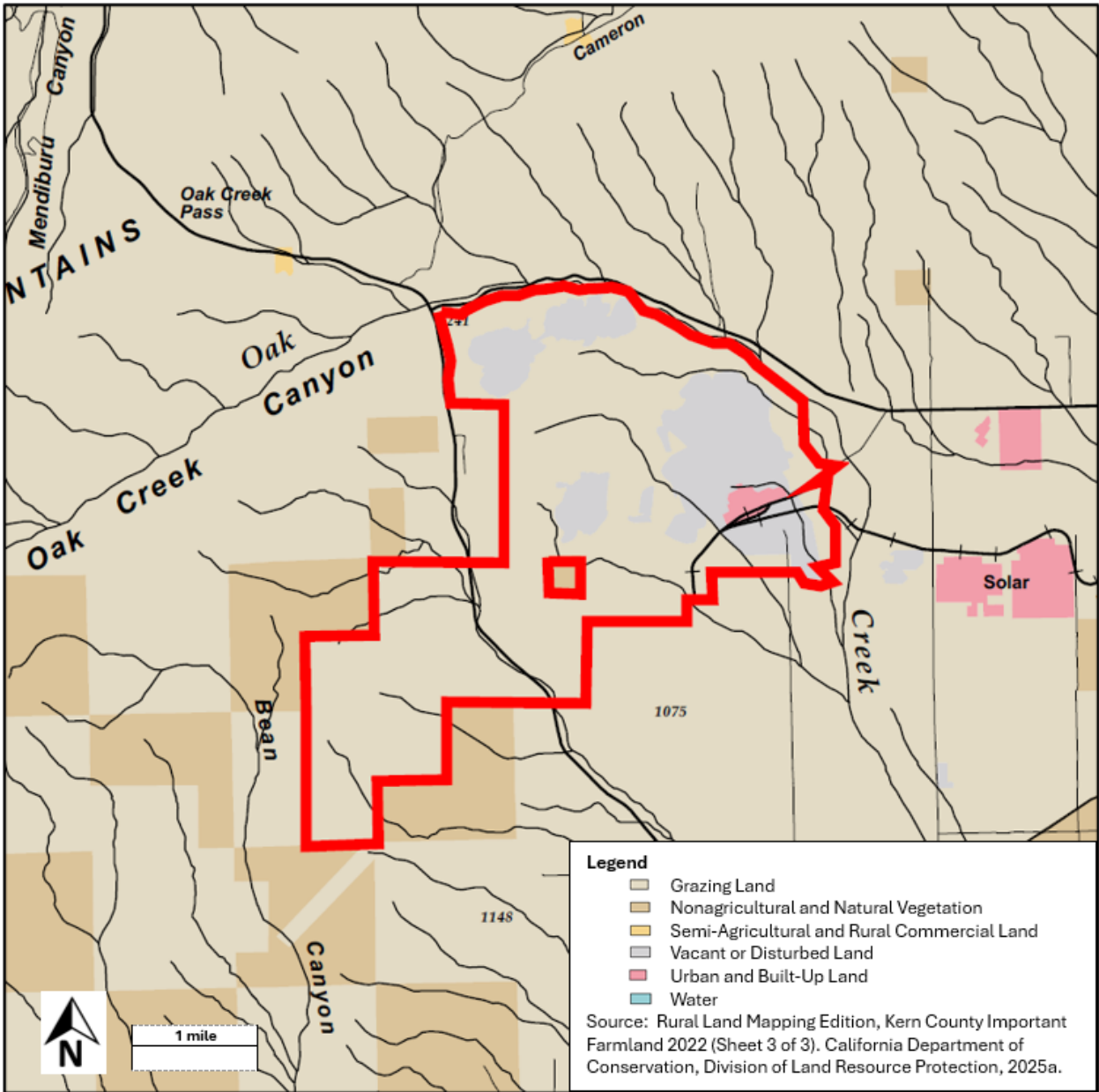


Figure 4.2-1
Important Farmland Mapping Program Designations

Williamson Act Contract Lands

According to the County of Kern's Interactive County Map (GIS Tool), the project site does not support lands that are subject to Williamson Act contracts, either active on in nonrenewal. There are no lands under Williamson Act contracts adjacent to or in the vicinity of the project site. The project site is not located within an Agricultural Preserve.

Zoning

As shown by parcel in Table 3-1 of **Chapter 3, Project Description**, the project site has zone classifications of A (Exclusive Agriculture), A WE (Exclusive Agriculture, Wind Energy Combining), A-1 (Limited Agriculture), A-1 FP (Limited Agriculture, Floodplain Combining), A-1 WE (Limited Agriculture, Wind Energy Combining), M-3 (Heavy Industrial), M-3 FP (Heavy Industrial, Floodplain Combining), M-3 WE (Heavy Industrial, Wind Energy Combining), E(20) RS (Estate – 20 acres, Residential Suburban Combining), NR(20) (Natural Resource – 20 acres), and FPP (Floodplain Primary).

Forestry Resources

The project site does not contain forest or timberland resources. No land in the vicinity of the project site is zoned as forest land or timberland, or for timberland production.

4.2.3 Regulatory Setting

Federal

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

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

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

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

State

California Department of Conservation, Division of Land Resource Protection

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

The list below describes the categories mapped by the DOC through the Farmland Mapping and Monitoring Program (FMMP). Collectively, lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are referred to as "farmland." The descriptions below recite descriptions as provided in DOC's 2016-2018 California Farmland Conversion Report (DOC 2018).

- **Prime Farmland** has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Farmland of Statewide Importance** is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Unique Farmland** consists of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- **Farmland of Local Importance** is land of importance to the local agricultural economy as determined by each county's board of supervisors following recommendations by a local advisory committee.
- **Grazing Land.** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups with an interest in grazing activities.
- **Urban and Built-Up Land** is occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, energy infrastructure, industrial, commercial, institutional facilities, prisons, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water infrastructure.
- **Water** is defined as perennial water bodies with an extent of at least 40 acres.
- **Other Land** is land not included in any other mapping category. Common examples include low density rural developments, vegetative and riparian areas not suitable for

livestock grazing, confined animal agriculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

California Land Conservation Act (Williamson Act)

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

Under the Williamson Act, a landowner commits the parcel to a 10-year period, during which time no conversion out of agricultural use is permitted. In return, the land is taxed at a rate based on the actual use (i.e., agricultural production), as opposed to its unrestricted market value. Each year the contract automatically renews unless a notice of nonrenewal or cancellation is filed. However, the application to cancel must be consistent with the criteria of the affected county or city. Nonrenewal or contract cancellation does not change a property's zoning. The Williamson Act states that a board or council will, by resolution, adopt rules governing the administration of agricultural preserves. The rules of each agricultural preserve specify the allowed uses. Generally, any commercial agricultural use would be permitted within any agricultural preserve. In addition, local governments may identify compatible uses permitted under a permit (DOC 2025b).

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

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

- The use would not result in the significant removal of adjacent contracted land from agricultural or open-space use.

Farmland Security Zone Act

The Farmland Security Zone Act is similar to the Williamson Act and was passed by the California State legislature in 1999 to ensure that long-term farmland preservation is part of public policy in the State. Farmland Security Zone Act contracts are sometimes referred to as “Super Williamson Act Contracts.” Under the provisions of this act, a landowner already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the County. Farmland Security Zone classification automatically renews each year for an additional 20 years. In return for an additional 35 percent reduction in the taxable value of land and growing improvements (in addition to Williamson Act tax benefits), the owner of the property promises not to develop the property into nonagricultural uses.

Public Resources Code Section 21060.1

Public Resources Code Section 21060.1 uses the FMMP to define agricultural land for the purposes of assessing environmental impacts. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and analyze the conversion of such lands. The FMMP provides analysis pertaining to agricultural land use changes throughout California. Public Resources Code Section 21060.1 defines “agricultural land” as such: “Agricultural land means prime farmland, farmland of statewide importance or unique farmland, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California.”

Local

Kern County General Plan

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

- **8.1 Intensive Agriculture (minimum parcel size 20 acres gross).** Lands devoted to the production of irrigated crops or having potential for such use. Uses shall include, but are not limited to, the following: irrigated cropland, orchards, vineyards, horse ranches, raising of nursery stock ornamental flowers and Christmas trees, fish farms, bee keeping ranch, farm facilities, one single-family dwelling unit, cattle feed yards, dairies, dry land farming, livestock grazing, water storage, groundwater recharge acres, mineral, aggregate, petroleum exploration and extraction, hunting clubs, wildlife preserves, farm labor housing, public utility uses, and agricultural industries pursuant to provisions of the Kern County Zoning Ordinance and land within development areas subject to significant physical constraints.
- **8.2 Resource Reserve (minimum parcel size is 20 acres gross, except for lands subject to a Williamson Act Contract/Farmland Security Zone Contract, in which case the minimum parcel size shall be 80 acres gross).** Lands devoted to areas of

mixed natural resource characteristics including rangeland, woodland, and wildlife habitat which occur in an established County water district.

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

Uses shall include, but are not limited to the following: recreational activities; livestock grazing; dry land farming; ranching facilities; wildlife and botanical preserves; timber harvesting; one single-family dwelling unit; irrigated croplands; water storage or groundwater recharge areas; mineral; aggregate; petroleum exploration and extraction; open space and recreational uses; land within development areas subject to significant physical constraints; and State and federal lands that have been converted to private ownership.

The policies, goals, and implementation measures in the *Kern County General Plan* and the *Cameron Canyon Specific Plan* for agricultural resources applicable to the project are provided below.

Kern County General Plan Chapter 1. Land Use, Open Space, and Conservation Element – 1.9 Resource

Goals

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

Policies

- **Policy 1.** Appropriate resource uses of all types will be encouraged as desirable and consistent interim uses in undeveloped portions of the County regardless of General Plan designations.
- **Policy 7.** Areas designated for agricultural use, which include Class I and II and other enhanced agricultural soils with surface delivery water systems, should be protected from incompatible residential, commercial, and industrial subdivision and development activities.
- **Policy 12.** Areas identified by the Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service) as having high range-site value should be conserved for Extensive Agriculture uses or as Resource Reserve, if located within a County water district.

Implementation Measures

- **Measure F.** Prime agricultural lands, according to the Kern County Interim-Important Farmland 2000 map produced by the Department of Conservation, which have Class I or II soils and a surface delivery system shall be conserved through the use of agricultural zoning with minimum parcel size provisions.

Cameron Canyon Specific Plan – Section VI. Resource*Goals*

- **Goal 1.** To contain new development within an area large enough to meet projected demand, but in locations that will not impair rangeland and other resource uses.
- **Goal 2.** To protect area soils from erosion by encouraging proper soil management practices as defined by the Soil Conservation Service, by ranchers, and wind farm developers in cooperation with the Tehachapi Resource Conservation District.
- **Goal 3.** To conserve lands that are poorly suited for residential development by encouraging their maintenance as rangeland, animal habitat, and watersheds.

Policies

- **Policy 1.** Areas identified by the U.S. Soil Conservation Service as having severe limitations for shallow excavations, roads, and septic tank fields, or as having high or very high erosion potential will be reserved for resource uses.
- **Policy 3.** Ranchers will be encouraged to consult with the Tehachapi Resources Conservation District for soil management and assistance.

Implementation Standards

- **Implementation Standard 1.** The County shall initiate rezoning proceedings to change existing A-1 (Limited Agriculture) and E (20) RS (Estate – 20 acres) zones to compatible resource zones.
- **Implementation Measure 2.** Prior to the issuance of grading or building permits for development, the developer shall submit a soils capability report and a soil management plan. The soils report shall be prepared by a soils engineer; the soil

management plan shall be prepared in cooperation with the Tehachapi Resource Conservation District and shall address means of avoiding soil erosion. Permits shall not be given final clearance until all recommendations contained within the soils report and the management plan have been implemented.

Kern County Zoning Ordinance (Title 19 – Zoning Code)

The Kern County Zoning Ordinance establishes basic regulations under which land is developed. This includes allowable uses, building setback requirements, and development standards. Pursuant to State law, the Zoning Ordinance must be consistent with the Kern County General Plan. The basic intent of the Kern County Zoning Ordinance is to promote and protect the public health, safety, and welfare via the orderly regulation of the land uses throughout the unincorporated area of the County. The Zoning Ordinance applies to all property in unincorporated Kern County, except land owned by the federal government or any of its agencies. Mine reclamation is permitted in all Zone Districts comprising the proposed project site, with approval of a Conditional Use Permit (CUP). While the entitlement is classified as a CUP, it is not a conditional use permit in the sense it allows a particular *use*. Rather, the County uses CUPs as the vehicle through which to approve the reclamation plan.

The purpose of the Exclusive Agriculture (“A”) District is to designate areas suitable for agricultural uses and to prevent the encroachment of incompatible uses onto agricultural lands and the premature conversion of such lands to nonagricultural uses. Allowable land uses within the “A” zone are set forth in Sections 19.12.020 and 19.12.030 of the Kern County Zoning Ordinance. The purpose of the Limited Agriculture (A-1) District is to designate areas suitable for a combination of estate-type residential development, agricultural uses, and other compatible uses. Allowable land uses within the A-1 zone are set forth in Sections 19.14.020 and 19.14.030 of the Kern County Zoning Ordinance. The purpose of the Heavy Industrial (M-3) District is to designate areas suitable for heavy manufacturing and industrial uses which have the greatest potential for producing undesirable or adverse by-products, including traffic, noise, odors, dust, and vibrations. Allowable land uses within the M-3 zone are set forth in Sections 19.40.020 and 19.40.030 of the Kern County Zoning Ordinance. The purpose of the Estate (E) District is to designate areas suitable for larger lot residential living environments. Allowable land uses within the E zone are set forth in Sections 19.16.020 and 19.16.030 of the Kern County Zoning Ordinance. The purpose of the Natural Resource (NR) District is to designate lands that contain productive or potentially productive petroleum, mineral, or timber resources and to prevent the encroachment of incompatible uses onto such lands. Allowable land uses within the NR zone are set forth in Sections 19.46.020 and 19.46.030 of the Kern County Zoning Ordinance. The purpose of the Floodplain Primary (FPP) District is to protect the public health and safety and minimize property damage by designating areas that are subject to flooding with high velocities or depths and by establishing reasonable restrictions on land use in such areas. Allowable land uses within the FPP zone are set forth in Sections 19.50.020 and 19.50.030 of the Kern County Zoning Ordinance.

Williamson Act Standard Uniform Rules

Kern County has adopted a set of rules that identify compatible land uses within agricultural preserves established under the Williamson Act. The rules restrict uses on such land to agricultural or other compatible uses. Agricultural uses include crop cultivation, grazing, commercial wind farms, livestock breeding, dairy, and uses that are incidental to these uses.

Other compatible agricultural uses include those associated with public utilities (e.g., gas, electric, communications, water, and other similar public utilities).

4.2.4 Impacts and Mitigation Measures

Methodology

The proposed project's potential impacts on agricultural and forestry resources have been evaluated on a qualitative basis using a variety of resources, including in the Kern County Agricultural Crop Report (Kern County Department of Agriculture and Measurement Standards 2024), Important Farmland Maps prepared by the DOC, and the analysis of applicable goals and policies related to agricultural resources in the Kern County General Plan. The evaluation of project impacts is based on a thorough analysis of the Kern County General Plan's applicable goals and policies related to agricultural resources, professional judgment, and the significance criteria established by CEQA.

For this analysis of potential impacts associated with agricultural and forest resources, baseline conditions are the anticipated future project site condition at the completion of vested mining pursuant to the mine plan discussed in **Chapter 3** and illustrated on **Figure 3-7** in **Chapter 3**. Impacts of the project (reclamation) are assessed against the future mined condition baseline.

Thresholds of Significance

As established in Appendix G of the CEQA Guidelines, the Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria to determine if a project could potentially have a significant adverse effect on agricultural or forest resources.

A project would have a significant impact on agriculture and forest resources if it would:

- a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural uses;
- b. Conflict with existing zoning for agricultural use or a Williamson Act Contract;
- c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g));
- d. Result in the loss of forest land or conversion of forest land to non-forest use; or
- e. Involve other changes in the existing environment which, because of their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use.

Project Impacts

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

The project site does not contain lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance pursuant to the Farmland Mapping and Monitoring Program and no such designated lands would exist within the project site under baseline conditions following the completion of vested mining. Therefore, the project would have no impact associated with conversion of farmland to nonagricultural use.

Mitigation Measures

Mitigation is not required.

Level of Significance After Mitigation

Impacts would be less than significant.

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

The project site contains lands zoned to allow for agricultural use but no agricultural uses are present within the site. The site does not contain any land subject to a Williamson Act contract. At completion of vested mining, mined conditions are not expected to be suitable for agricultural use. As such, no agricultural uses or lands subject to Williamson Act contracts are expected to be present under baseline conditions following completion of vested mining. Reclamation would provide for demolition and removal of mining and cement plant equipment, stabilization of overburden stockpiles, and revegetation of disturbed areas in accordance with the project's reclamation plan. Reclamation activities would not have the potential to convert farmland to nonagricultural use and would not conflict with Williamson Act contracts. Reclamation activities are also consistent with the current zoning. Although agricultural use is not a proposed reclaimed site end use, reclaimed conditions would be no less favorable for agricultural uses than baseline conditions at completion of vested mining. Thus, the project would have a less than significant impact associated with potential conflicts with existing zoning for agricultural use and would have no impact associated with Williamson Act contracts.

Mitigation Measures

Mitigation is not required.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact 4.2-3: The project would conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined in Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).

The project site does not contain lands zoned for forest land, timberland, or zoning for timberland production, and no such lands would exist within the project site under baseline conditions following the completion of vested mining. Therefore, the project would have no impact associated with conflicts with forest land or timberland.

Mitigation Measures

Mitigation is not required.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact 4.2-4: The project would result in the loss of forest land or conversion of forest land to non-forest use.

The project site does not contain forest land and no forest land would exist under baseline conditions within the project site following the completion of vested mining. Therefore, the project would have no impact associated with loss of forest land or conversion of forest land to non-forest use.

Mitigation Measures

Mitigation is not required.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact 4.2-5: The project would involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

The project site does not contain agricultural or forest resources and no such resources would be present under baseline conditions following completion of vesting mining. Neither vested mining nor reclamation would directly convert farmland to non-agricultural use or convert forest land to non-forest use. No agricultural uses or forest uses are identified on lands in proximity to the project site, and no aspects of the project would have the potential to convert farmland to non-agricultural use or convert forest land to non-forest use. Thus, the project would have no impact associated with conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

Mitigation Measures

Mitigation is not required.

Level of Significance After Mitigation

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. **Section 3.7, *Cumulative Effects Overview***, of this EIR discusses cumulative projects near the project (**Table 3-15, *Cumulative Projects List***, in **Chapter 3, *Project Description***, lists specific projects considered in the cumulative impact analysis). The geographic scope for evaluating potential cumulative impacts to agricultural and forest resources considers areas and projects within a 6-mile radius of the project site.

Impact 4.2-6: The project would contribute to cumulative agriculture and forestry resource impacts.

As shown in **Table 3-15, *Cumulative Projects List***, of **Chapter 3, *Project Description***, seven projects are identified within the cumulative projects study area. None of the projects contain important farmland or forest land and none are expected to contribute to a cumulative loss of farmland or forest land. Although some vested mining would occur on land zoned for agricultural use, neither vested mining operations nor reclamation activities would result in the loss of farmland or forest land as the project site does not contain lands used for agricultural or timberland. Further, neither vested mining nor reclamation would affect the potential for agricultural production or timber production to occur within the cumulative projects study area. Therefore, the project would not substantially contribute to a cumulative impact related to agricultural or forestry resources. Cumulative impacts would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance After Mitigation

Cumulative impacts would be less than significant.

Section 4.3

Air Quality

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4.3.1 Introduction

This section of the Environmental Impact Report (EIR) evaluates short- and long-term air quality impacts associated with implementation of the project and describes the affected environment and regulatory setting for air quality. Potential impacts on the environment and human health due to emissions affecting air quality during implementation of the project are discussed using applicable thresholds where indicated. Mitigation measures that would reduce the project's impacts, where applicable, are also discussed. Information in this section is based in part on the following document:

- *Air Quality and Greenhouse Gas Assessment Mojave Life of Mine Reclamation Plan Amendment* (Trinity Consultants 2025), included as Appendix C.

4.3.2 Environmental Setting

The project site is located entirely in the northwestern portion of the Mojave Desert Air Basin (MDAB). Air pollutant emissions and other air quality programs in the MDAB are regulated by the Eastern Kern Air Pollution Control District (EKAPCD).

The MDAB encompasses the desert portion of San Bernardino County and Los Angeles County, the Palo Verde Valley in eastern Riverside County, and the southeastern portion of Kern County. The EKAPCD has jurisdiction over that portion of the MDAB east of the Tehachapi Mountains within Kern County.

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

Sensitive Receptors

Sensitive receptors for air pollutants are locations where human populations, especially children, senior citizens, and sick persons, are present, and where there is a reasonable expectation of continuous human exposure to pollutants. Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Land uses that can be considered sensitive receptors include residential communities, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive individuals with compromised immune systems, such as children and the elderly, may be exposed to emissions from the project. Worker

receptors refer to employees and locations where people work. Impacts on sensitive receptors are of particular concern because they are the people most vulnerable to the effects of air pollution.

No non-residential sensitive receptors such as schools and hospitals were identified within 2 miles of the project area. **Figure 4.3-1, Residential Receptor Locations within 2 Miles of Project Site**, shows the locations of residential receptors within 2 miles of the project site. Residential sensitive receptors identified within 2 miles of the project area include the nine residential sensitive receptors listed in **Table 4.3-1, Residential Receptor Locations within 2 Miles of Project Site** (Trinity Consultants 2025).

Table 4.3-1 Residential Receptor Locations within 2 Miles of Project Site

Residential Sensitive Receptor ID#	Latitude	Longitude	Direction from Project Boundary
1	35.069535	-118.346245	North
2	35.060869	-118.368311	Northwest
3	34.991275	-118.331005	South
4	34.990905	-118.341978	South
5	34.990261	-118.327478	South
6	34.989687	-118.329664	South
7	34.984855	-118.335420	South
8	35.056053	-118.372460	Northwest
9	35.054351	-118.372659	Northwest

Source: Trinity Consultants 2025.

Meteorological Conditions

The desert portion of the MDAB is commonly referred to as the High Desert because of its altitude at approximately 1,000 to 4,500 feet above mean sea level. The region is characterized by a series of low mountain ranges and broad alluvial valleys.

Climate of the project area is a continentally modified Mediterranean type, characterized by cool, wet winters and hot, dry summers. Temperatures during the summer drop to the mid to lower 50s and rise to the upper 80s. In winter, the average high temperatures reach into the upper 50s, and the average low temperatures drop into the mid- 30s. The closest meteorological station to the project site is located in Tehachapi, California. The mean annual precipitation in Tehachapi, California is 11.34 inches, the bulk of which falls during the period November through March. Snowfall commonly occurs from December through March (Trinity Consultants 2025).

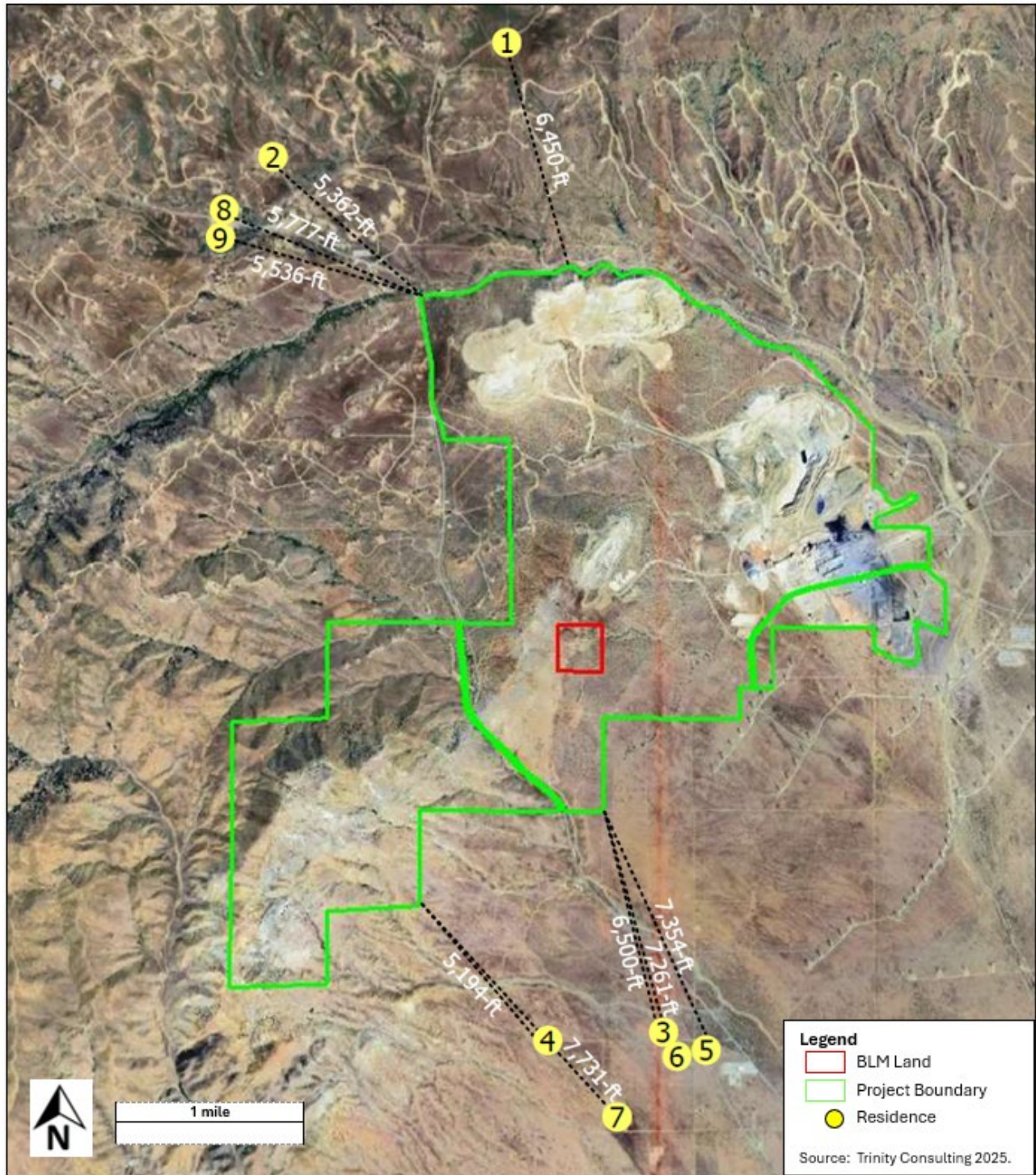


Figure 4.3-1
Residential Receptor Locations within 2 Miles of Project Site

Meteorological data for various monitoring stations is maintained by the Western Regional Climate Center. Meteorological data for the project site is expected to be similar to the data recorded at the Tehachapi, California monitoring station. **Table 4.3-2**, *Annual Average Precipitation at Tehachapi (1981 – 2010)*, presents average temperatures and precipitation data recorded at the Tehachapi, California monitoring station from 1981 through 2010.

Table 4.3-2 Annual Average Precipitation at Tehachapi (1981 – 2010)

Avg. Maximum Temp	66.9 degrees Fahrenheit
Avg. Minimum Temp	43.2 degrees Fahrenheit
Average Total Precipitation	11.34 inches
Average Total Snowfall	0.0 inches

Source: Trinity Consultants 2025, based on Western Regional Climate Center, <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca8826>. Accessed June 30, 2021.

Ambient Air Quality Standards

National and State Standards

Both the Federal government and State of California have established ambient air quality standards for several different pollutants, which are summarized in **Table 4.3-3**, *National and California Ambient Air Quality Standards*. For some pollutants, separate standards have been set for different time periods. Most standards have been set to protect public health. For other pollutants, standards have been based on some other value (such as protection of crops, protection of materials, or avoidance of nuisance conditions).

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

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

Regional and Local Standards

The NAAQS establish the level for an air pollutant above which detrimental effects to public health or welfare may result. The NAAQS are defined as the maximum acceptable concentrations that, depending on the pollutant, may not be equaled or exceeded more than once per year or in some cases as a percentile of observations. California has generally adopted more stringent ambient air quality standards for the criteria air pollutants (i.e., California

Ambient Air Quality Standards [CAAQS]). **Table 4.3-3, *National and California Ambient Air Quality Standards***, presents both sets of ambient air quality standards (i.e., national and State) as well as attainment status for each of these standards within the EKAPCD jurisdiction. If a pollutant concentration in an area is lower than the established standard, the area is classified as being in “attainment” for that pollutant. If the pollutant concentration meets or exceeds the standard (depending on the specific standard for the individual pollutants), the area is classified as a “nonattainment” area. If there are not enough data available to determine whether the standard is exceeded in an area, the area is designated “unclassified.”

Table 4.3-3 National and California Ambient Air Quality Standards

Criteria Pollutant	Averaging Time	California Standards		National Standards	
		Concentration ³	EKAPCD Attainment Status ⁵	Primary	EKAPCD Attainment Status ⁶
Ozone (O ₃)	1-Hour	0.09 ppm (180 µg/m ³)	Nonattainment	N/A	--
	8-Hour	0.070 ppm (137 µg/m ³)	Nonattainment	0.070 ppm (137 µg/m ³)	Severe Nonattainment
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m ³)	Unclassified	9 ppm (10 mg/m ³)	Unclassifiable/ Attainment
	1-Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)	
Nitrogen Dioxide (NO ₂) ⁹	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Attainment	53 ppb (100 µg/m ³)	Unclassified
	1-Hour	0.18 ppm (339 µg/m ³)		100 ppb (188 µg/m ³) ⁶	
Sulfur Dioxide (SO ₂) ¹	24-Hour	0.04 ppm (105 µg/m ³)	Attainment	0.14 ppm	Unclassified
	3 Hour	N/A		N/A	
	1-Hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³)	
	Annual	N/A		0.030 ppm	
Particulate Matter <10 Microns in Aerodynamic Diameter (PM ₁₀) ²	24-Hour	50 µg/m ³	Nonattainment	150 µg/m ³	Unclassifiable/ Attainment
	Annual Arithmetic Mean	20 µg/m ³		N/A	
Particulate Matter <2.5 Microns in Aerodynamic	24-Hour	No Separate State Standard	Unclassified	35 µg/m ³	Unclassifiable/ Attainment
	Annual Arithmetic Mean	12 µg/m ³		12 µg/m ³	

Table 4.3-3 National and California Ambient Air Quality Standards

Criteria Pollutant	Averaging Time	California Standards		National Standards	
		Concentration ³	EKAPCD Attainment Status ⁵	Primary	EKAPCD Attainment Status ⁶
Diameter (PM _{2.5}) ²					
Lead (Pb) ³	30 days average	1.5 µg/m ³	Attainment	N/A	Unclassifiable/Attainment
	Rolling 3-month Average	N/A		1.5 µg/m ³	
Visibility-Reducing Particles (VRP) ⁴	8-Hour (10 am to 6 pm, PST)		Unclassified	No Federal Standards	
Sulfate	24 Hour	25 µg/m ³	Attainment		
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m ³)	Unclassified		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m ³)	Unclassified		

Source: Trinity Consultants 2025, data per Tables 3-1 and 3-2.

Notes:

ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; km = kilometers; RH = relative humidity; PST = Pacific standard time; N/A = not applicable.

- On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour National standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ National standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour National standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour National standard to the California standard the units can be converted to ppm. In this case, the National standard of 75 ppb is identical to 0.075 ppm.
- The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- In 1989, CARB converted both the general statewide 10-mile visibility standards and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.
- Source: CARB, Maps of State and Federal Area Designations, <https://ww2.arb.ca.gov/resources/documents/mapsstate-and-federal-area-designations>, Accessed July 9, 2021.
- Source: EPA Greenbook https://www3.epa.gov/airquality/greenbook/anayo_ca.html, accessed September 2021.

Existing Attainment Status

As shown in **Table 4.3-3, National and California Ambient Air Quality Standards**, above, the EKAPCD has been designated as unclassifiable/attainment for the NAAQS for CO, PM₁₀, PM_{2.5}, and lead; severe nonattainment for the O₃ eight-hour average standard; and unclassified for NO₂ and SO₂. The EKAPCD has been designated as nonattainment for the state one-hour and eight-hour standards for O₃, and PM₁₀; unclassified VRP, Sulfate, Hydrogen Sulfide, Vinyl Chloride, PM_{2.5} and CO; and attainment for NO₂, SO₂, sulfates and lead.

Ambient Air Monitoring

For the purposes of background data and this air quality assessment, Trinity Consultants (2025) relied on data collected in the last three years for the CARB monitoring stations that are located in the closest proximity to the project site. **Table 4.3-4, *Air Quality Monitoring Data in Project Area (2018 - 2020)***, provides the background concentrations for O₃, PM₁₀, PM_{2.5}, CO, NO₂, and Pb for the years 2018 through 2020. Information is provided for the Lancaster Division Street, Bakersfield – Municipal Airport, Edison, and Bakersfield – California monitoring stations for 2018 through 2020. No data is available for SO₂, vinyl chloride, or other toxic air contaminants (TACs) in the MDAB.

Table 4.3-4 Air Quality Monitoring Data in Project Area (2018 - 2020)

Pollutant and Monitoring Station Location	Maximum Concentration			Days Exceeding Standard		
	2018	2019	2020	2018	2019	2020
O₃ – 1-hour CAAQS (0.09 ppm)						
Lancaster Division St	0.125	0.096	0.099	1	0	0
Bakersfield – Municipal Airport	*	*	*	*	*	*
Edison	0.12	0.105	0.131	0	0	2
Arvin	0.113	0.108	0.133	0	0	1
Bakersfield-California	0.107	0.097	0.11	0	0	0
O₃ – 8-hour CAAQS (0.07 ppm)						
Lancaster Division St	0.104	0.081	0.083	48	13	8
Bakersfield – Municipal Airport	*	*	*	*	*	*
Edison	0.101	0.086	0.11	82	54	79
Arvin	0.1	0.086	0.104	65	37	70
Bakersfield-California	0.098	0.088	0.098	60	24	25
O₃ – 8-hour NAAQS (0.070 ppm)						
Lancaster Division St	0.087	0.076	0.079	48	13	8
Bakersfield – Municipal Airport	*	*	*	*	*	*
Edison	0.096	0.084	0.101	82	54	79
Arvin	0.1	0.086	0.104	65	37	70
Bakersfield-California	0.093	0.081	0.083	60	24	25
PM₁₀ – 24-hour CAAQS (50 µg/m³)						
Lancaster Division St	89	165	192	0	2	1
Bakersfield – Municipal Airport	*	*	*	*	*	*
Edison	*	*	*	*	*	*
Bakersfield-California	134	116	115	0	0	0
PM₁₀ – 24-hour NAAQS (150 µg/m³)						
Lancaster Division St	85	159	121	0	2	1
Bakersfield – Municipal Airport	*	*	*	*	*	*
Edison	*	*	*	*	*	*
Bakersfield-California	73	94	106	0	0	0

Table 4.3-4 Air Quality Monitoring Data in Project Area (2018 - 2020)

Pollutant and Monitoring Station Location	Maximum Concentration			Days Exceeding Standard		
	2018	2019	2020	2018	2019	2020
PM_{2.5} - 24-hour NAAQS (35 µg/m³)						
Lancaster Division St	16.4	11.6	39.8	1	0	9
Bakersfield – Municipal Airport	60.8	46.7	81.4	9	3	17
Edison	*	*	*	*	*	*
Bakersfield-California	96.1	43.4	143.9	1	12	4
CO - 8-Hour CAAQS & NAAQS (9.0 ppm)						
Lancaster Division St	1	0.9	1.1	0	0	0
Bakersfield – Municipal Airport	*	*	*	*	*	*
Edison	*	*	*	*	*	*
Bakersfield-California	*	*	*	*	*	*
NO₂ - 1-Hour CAAQS (0.18 ppm)						
Lancaster Division St	0.0476	0.0498	0.0515	0	0	0
Bakersfield – Municipal Airport	*	*	*	*	*	*
Edison	0.042	0.034	0.0306	0	0	0
Bakersfield-California	0.0615	0.0671	0.0504	0	0	0
NO₂ - 1-Hour NAAQS (0.10 ppm)						
Lancaster Division St	0.0397	0.0398	0.04	0	0	0
Bakersfield – Municipal Airport	*	*	*	*	*	*
Edison	0.0309	0.0301	0.0265	0	0	0
Bakersfield-California	0.051	0.0539	0.0449	0	0	0
SO₂ – 24-hour Concentration - CAAQS (0.04 ppm) & NAAQS (0.14 ppm)						
No data collected	*	*	*	*	*	*
Pb - 30-Day Average Concentration CAAQS (1500 ng/m³)						
Bakersfield-California	11.7	8.47	5.62	*	*	*
Visibility Reducing Particles – 8-hour CAAQS (Extinction of 0.23 per Km or 0.07 per Km for the Statewide and Lake Tahoe Standards Respectively)						
No data collected	*	*	*	*	*	*
Sulfates – 24-hour CAAQS (25 µg/m³)						
No data collected	*	*	*	*	*	*
Hydrogen Sulfide – 1-hour CAAQS (42 µg/m³)						
No data collected	*	*	*	*	*	*
Vinyl Chloride – 24-hour CAAQS (26 µg/m³)						
No data collected	*	*	*	*	*	*

Source: Trinity Consultants 2025, per CARB 2020.

Notes:

ppm = parts per million

* These monitoring stations are either not equipped to monitor the specified pollutant or contained insufficient data for the time period.

Criteria Air Pollutants

The following is a general description of the physical and health effects from pollutants including the governmentally regulated air pollutants shown in **Table 4.3-3, *National and California Ambient Air Quality Standards***, above.

Ozone (O₃)

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

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

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

While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular diseases, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems, such as forests and foothill communities; agricultural crops; and some manmade materials, such as rubber, paint, and plastic. High levels of ozone may negatively affect immune systems, making people more susceptible to respiratory illnesses, including bronchitis and pneumonia. Ozone also accelerates aging and exacerbates pre-existing asthma and bronchitis. Evidence has linked the onset of asthma to exposure to elevated ozone levels in exercising children (CARB 2016). Active people, both children and adults, appear to be more at risk from ozone exposure than those with a low level of activity. In addition, the elderly and those with respiratory disease are also considered sensitive populations for ozone.

Ozone is a powerful oxidant—it can be compared to household bleach, which can kill living cells (such as germs or human skin cells) upon contact. Ozone can damage the respiratory tract,

causing inflammation and irritation, and it can induce symptoms such as coughing, chest tightness, shortness of breath, and worsening of asthmatic symptoms. Ozone in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. Exposure to levels of ozone above the current ambient air quality standard leads to lung inflammation, lung tissue damage, and a reduction in the amount of air inhaled into the lungs. Elevated ozone concentrations also reduce crop and timber yields, damage native plants, and damage materials such as rubber, paints, fabric, and plastics (CARB 2016).

Reactive Organic Gases (ROG) and Volatile Organic Compounds (VOC)

Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases, including ROG and volatile organic compounds (VOCs), which include all hydrocarbons except those exempted by the CARB. Therefore, ROG are a set of organic gases based on State rules and regulations. VOCs are similar to ROG in that they include all organic gases except those exempted by Federal law.

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

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

Carbon Monoxide (CO)

CO, an odorless, colorless, poisonous gas that is highly reactive, is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. CO is a byproduct of motor vehicle exhaust, which contributes more than 66% of all CO emissions nationwide. In cities, automobile exhaust can cause as much as 95% of all CO emissions. These emissions can result in high concentrations of CO, particularly in local areas with heavy traffic congestion. Other sources of CO emissions include industrial processes and fuel combustion in sources such as boilers and incinerators. Despite an overall downward trend in concentrations and emissions of CO, some metropolitan areas still experience high levels of CO. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground-level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

When inhaled, CO enters the bloodstream and binds more readily to hemoglobin, the oxygen-carrying protein in blood, than oxygen, thereby reducing the oxygen-carrying capacity of blood and reducing oxygen delivery to organs and tissues. The health threat from CO is most serious for those who suffer from cardiovascular disease. Healthy individuals are also affected but only at higher levels of exposure. Exposure to CO can cause chest pain in heart patients, headaches,

and reduced mental alertness. At high concentrations, CO can cause heart difficulties in people with chronic diseases and can impair mental abilities. Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, difficulty performing complex tasks, and, with prolonged enclosed exposure, death.

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

Most of the studies that evaluate the adverse health effects of CO on the central nervous system examine high-level poisoning. Such poisoning results in common flu and cold symptoms (shortness of breath on mild exertion, mild headaches, and nausea) to unconsciousness and death. At extremely high concentrations, CO is poisonous and can cause death (USEPA 2021a).

Nitrogen Dioxide (NO₂) and Nitrogen Oxide (NO_x)

NO₂ is a reddish brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide. NO_x is a family of highly reactive gases that is a primary precursor to the formation of ground-level ozone, and reacts in the atmosphere to form acid rain. NO_x is emitted from solvents and combustion processes in which fuel is burned at high temperatures, principally motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. A brownish gas, NO_x is a strong oxidizing agent that reacts in the air to form corrosive nitric acid as well as toxic organic nitrates. NO_x is also an ozone precursor that combines with ROG to form ozone (see discussion above for the health effects of ozone).

NO_x reacts with other pollutants to form ground-level ozone, nitrate particles, acid aerosols, and NO₂, which cause respiratory problems. NO_x and the pollutants formed from NO_x can be transported over long distances, following the patterns of prevailing winds. Therefore, controlling NO_x is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

Direct inhalation of NO_x can also cause a wide range of health effects. NO_x can irritate the lungs, cause lung damage, and lower resistance to respiratory infections such as influenza. Short-term exposures (e.g., less than 3 hours) to low levels of NO₂ may lead to changes in airway responsiveness and lung function in individuals with preexisting respiratory illnesses. These exposures may also increase respiratory illnesses in children. Long-term exposures to NO₂ may lead to increased susceptibility to respiratory infection and may cause irreversible lung damage. Other health effects are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NO_x can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to the production of particulate nitrates. Airborne NO_x can also impair visibility.

NO_x contributes to a wide range of environmental effects both directly and indirectly when combined with other precursors in acid rain and ozone. Increased nitrogen inputs to terrestrial

and wetland systems can lead to changes in plant species composition and diversity. Similarly, direct nitrogen inputs to aquatic ecosystems such as those found in estuarine and coastal waters can lead to eutrophication (a condition that promotes excessive algae growth, which can lead to a severe depletion of dissolved oxygen and increased levels of toxins harmful to aquatic life). Nitrogen, alone or in acid rain, also can acidify soils and surface waters. Acidification of soils causes the loss of essential plant nutrients and increased levels of soluble aluminum, which is toxic to plants. Acidification of surface waters creates conditions of low pH and levels of aluminum that are toxic to fish and other aquatic organisms. NO_x also contributes to visibility impairment.

Sulfur Dioxide (SO₂)

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

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

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

SO₂ tends to have more toxic effects when acidic pollutants, liquid or solid aerosols, and particulates are also present. Effects are more pronounced among “mouth breathers,” e.g., people who are exercising or who have head colds. SO₂ can also easily injure many plant species and varieties, both native and cultivated. Some of the most sensitive plants include various commercially valuable pines, legumes, red and black oaks, white ash, alfalfa, and blackberry. In addition, increases in SO₂ concentrations accelerate the corrosion of metals, probably through the formation of acids. SO₂ is a major precursor to acidic deposition. Sulfur oxides may also damage stone and masonry, paint, various fibers, paper, leather, and electrical components.

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

Particulate Matter (PM₁₀ and PM_{2.5})

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

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

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

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

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

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

Attaining the California particulate matter standards would annually prevent about 6,500 premature deaths, or 3% of all deaths. These premature deaths shorten lives by an average of 14 years. This is roughly equivalent to the same number of deaths (4,200 to 7,400) linked to secondhand smoke in 2000. In comparison, motor vehicle crashes caused 3,200 deaths, and 2,000 deaths resulted from homicide. Attaining the California particulate matter and ozone standards would annually prevent 4,000 hospital admissions for respiratory disease, 3,000 hospital admissions for cardiovascular disease, and 2,000 asthma-related emergency room visits. Exposure to diesel particulate matter causes about 250 excess cancer cases per year in California (Kern County 2006).

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

Sulfates (SO_4^{-2})

Sulfates (SO_4^{-2}) are particulate product that comes from the combustion of sulfur-containing fossil fuels. When sulfur monoxide or SO_2 is exposed to oxygen, it precipitates out into sulfates (SO_3 or SO_4). Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California because of regional meteorological features.

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

Lead

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

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

Hydrogen Sulfide (H₂S)

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

Exposure to low concentrations of H₂S may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Exposure to higher concentrations (above 100 ppm) can cause olfactory fatigue, respiratory paralysis, and death. Brief exposures to high concentrations of H₂S (greater than 500 ppm) can cause a loss of consciousness. In most cases, the person appears to regain consciousness without any other effects. However, in many individuals, there may be permanent or long-term effects such as headaches, poor attention span, poor memory, and poor motor function. No health effects have been found in humans exposed to typical environmental concentrations of H₂S (0.00011–0.00033 ppm). Deaths due to breathing in large amounts of H₂S have been reported in a variety of different work settings, including sewers, animal processing plants, waste dumps, sludge plants, oil and gas well drilling sites, and tanks and cesspools.

Vinyl Chloride

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

In humans, epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of liver angiosarcoma, which is a rare cancer, and have

suggested a relationship between exposure cancers of the lung and brain. There are currently no adopted ambient air quality standards for vinyl chloride.

Short-term exposure to vinyl chloride has been linked with the following acute health effects:

- Acute exposure of humans to high levels of vinyl chloride via inhalation has resulted in effects on the central nervous system, such as dizziness, drowsiness, headaches, and giddiness.
- Vinyl chloride is reported to be slightly irritating to the eyes and respiratory tract in humans. Acute exposure to extremely high levels of vinyl chloride has caused loss of consciousness; irritation to the lungs and kidneys; inhibition of blood clotting in humans; and cardiac arrhythmias in animals.
- Tests involving acute exposure of mice to vinyl chloride have shown high acute toxicity from inhalation exposure to the substance.

Long-term exposure to vinyl chloride concentrations has been linked with the following chronic health effects:

- Liver damage may result in humans from chronic exposure to vinyl chloride, through both inhalation and oral exposure.
- A small percentage of individuals occupationally exposed to high levels of vinyl chloride in air have developed a set of symptoms termed “vinyl chloride disease,” which is characterized by Raynaud’s phenomenon (fingers blanch and numbness and discomfort are experienced upon exposure to the cold), changes in the bones at the end of the fingers, joint and muscle pain, and scleroderma-like skin changes (thickening of the skin, decreased elasticity, and slight edema).
- Central nervous system effects (including dizziness, drowsiness, fatigue, headache, visual and/or hearing disturbances, memory loss, and sleep disturbances), as well as peripheral nervous system symptoms (peripheral neuropathy, tingling, numbness, weakness, and pain in fingers), have also been reported in workers exposed to vinyl chloride.

Several reproductive/developmental health effects from vinyl chloride exposure have been identified:

- Several case reports suggest that male sexual performance may be affected by vinyl chloride. However, these studies are limited by lack of quantitative exposure information and possible co-occurring exposure to other chemicals.
- Several epidemiological studies have reported an association between vinyl chloride exposure in pregnant women and an increased incidence of birth defects, while other studies have not reported similar findings.
- Epidemiological studies have suggested an association between men occupationally exposed to vinyl chloride and miscarriages during their wives’ pregnancies, although other studies have not supported these findings.

- Long-term exposure to vinyl chloride has also been identified as a cancer risk. Inhaled vinyl chloride has been shown to increase the risk of a rare form of liver cancer (angiosarcoma of the liver) in humans. Animal studies have shown that vinyl chloride, via inhalation, increases the incidence of angiosarcoma of the liver and cancer of the liver.

Visibility-Reducing Particles

This standard is a measure of visibility. The CARB does not yet have a measurement method that is accurate or precise enough to designate areas in the State as being in attainment or nonattainment. Visibility-reducing particles (VRPs) consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. Except for Lake County (which is designated to be in attainment), California's attainment status with respect to VRPs is currently designated as unclassified.

Toxic Air Contaminants (TACs)

Hazardous air pollutants (HAPs) is a term used by the Federal CAA that includes a variety of pollutants generated or emitted by industrial production activities. Called TACs under the California Clean Air Act (CCAA) of 1988, 10 pollutants have been identified through ambient air quality data as posing the most substantial health risk in California. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders. The CARB provides emission inventories for only the larger air basins.

Similar to the criteria pollutants, TACs are emitted from stationary, areawide, mobile, and natural sources. The primary sources of benzene in the state include mobile sources (87%) and stationary sources (12%). Forty-six percent of hexavalent chromium emissions are from stationary sources, such as electrical generation, aircraft and parts manufacturing, and fabricated metal product manufacturing. The majority of 1,3-butadiene emissions are generated from incomplete combustion of gasoline and diesel fuels—53% of 1,3-butadiene emissions are from mobile sources and 21% are from area sources, such as agricultural waste burning and open burning. Emissions of carbon tetrachloride are all produced by stationary sources such as chemical and allied produce manufacturers and petroleum refineries. Most of the emissions of para-dichlorobenzene are from consumer products such as non-aerosol insect repellents and solid/gel air fresheners. Eighty-two percent of formaldehyde emissions in California are from mobile sources, while 48% of methylene chloride emissions are from paint removers/strippers, automotive brake cleaners, and other consumer products. Perchloroethylene is produced primarily from stationary sources such as dry cleaning plants and manufacture of aircraft parts and fabricated metal parts. Emissions of diesel particulate matter (DPM) are from mobile sources (98%) and stationary sources (1%).

TACs do not have ambient air quality standards. Since no safe levels of TACs can be determined, there are no air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The requirements of the Air Toxic "Hot Spots" Information and Assessment Act apply to facilities that use, produce, or emit toxic chemicals. Facilities that are subject to the toxic emission inventory requirements of

the act must prepare and submit toxic emission inventory plans and reports, and periodically update those reports.

Crystalline Silica

Respirable crystalline silica means crystalline silicon dioxide with aerodynamic diameter of less than four microns (0.0004 centimeters). Silica or quartz is ubiquitous in nature. Most silica is amorphous and is therefore not crystalline as these two terms are mutually exclusive. Most dust generated by construction and mining dust sources including blasting is greater than 4 microns and therefore too large to be respirable. Respirable crystalline silica constitutes a de minimis fraction of dust from these sources and does not represent a significant health risk to neighbors of these types of projects. In order to result in toxic effects, the silica needs to be crystalline, smaller than 4 microns, and inhaled.

Inhalation of crystalline silica initially causes respiratory irritation and an inflammatory reaction in the lungs. Silicosis results from chronic exposure; it is characterized by the presence of histologically unique silicotic nodules and by fibrotic scarring of the lung. Lung diseases other than cancer associated with silica exposure include silicosis, chronic bronchitis, tuberculosis/silicotuberculosis, small airways disease, and emphysema. Ambient air exposures do not cause concern but levels to which workers (e.g., miners, sandblasters) may be exposed have been shown to cause cancer.

Acute exposures to high concentrations cause cough, shortness of breath, and pulmonary alveolar lipoproteinosis (acute silicosis). In a report on the hazards of exposure to crystalline silica, the American Thoracic Society (1997) stated: “Studies from many different work environments suggest that exposure to working environments contaminated by silica at dust levels that appear not to cause roentgenographically visible simple silicosis can cause chronic airflow limitation and/or mucus hypersecretion and/or pathologic emphysema.” Other researchers also concluded that “chronic levels of silica dust that do not cause disabling silicosis may cause the development of chronic bronchitis, emphysema, and/or small airways disease that can lead to airflow obstruction, even in the absence of radiological silicosis.” Fibrotic lesions associated with crystalline silica have also been found at autopsy in the lungs of granite workers who lacked radiological evidence of silicosis.

Silicosis results from chronic exposure; it is characterized by the presence of histologically unique silicotic nodules and by fibrotic scarring of the lung. Lung diseases other than cancer associated with silica exposure include silicosis, tuberculosis/silicotuberculosis, chronic bronchitis, small airways disease, and emphysema. Silica exposure has been implicated in autoimmune diseases (rheumatoid arthritis, scleroderma, systemic lupus erythematosus) in gold miners and granite workers and in the causation of kidney disease in some occupations, possibly by an immune mechanism.

Acetaldehyde

Acetaldehyde is classified as a Federal hazardous air pollutant and as a California TAC. Acetaldehyde is both directly emitted into the atmosphere and formed in the atmosphere from photochemical oxidation. Sources include combustion processes such as exhaust from mobile sources and fuel combustion from stationary internal combustion engines, boilers, and process heaters. In California, photochemical oxidation is the largest source of acetaldehyde

concentrations in the ambient air. In general, acetaldehyde concentrations are higher indoors than outdoors, due in part to the abundance of combustion sources, such as cigarettes, fireplaces, and woodstoves.

The primary acute effect of inhalation exposure to acetaldehyde is irritation of the eyes, skin, and respiratory tract in humans. At higher exposure levels, erythema, coughing, pulmonary edema, and necrosis may also occur. Acute inhalation of acetaldehyde resulted in a depressed respiratory rate and elevated blood pressure in experimental animals. Tests involving acute exposure of rats, rabbits, and hamsters have demonstrated acetaldehyde to have low acute toxicity from inhalation and moderate acute toxicity from oral or dermal exposure.

Benzene

Benzene is highly carcinogenic and occurs throughout California; benzene also has noncancer-related health effects. The primary sources of benzene emissions in the MDAB are mobile sources and stationary sources. The mobile source emissions are primarily gasoline-fueled.

Brief inhalation exposure to high concentrations can cause central nervous system depression. Acute effects include central nervous system symptoms of nausea, tremors, drowsiness, dizziness, headache, intoxication, and unconsciousness. Neurological symptoms of inhalation exposure to benzene include drowsiness, dizziness, headaches, and unconsciousness in humans. Ingestion of large amounts of benzene may result in vomiting, dizziness, and convulsions in humans. Exposure to benzene in liquid and vapor form may irritate the skin, eyes, and upper respiratory tract in humans. Redness and blisters may result from dermal exposure to benzene.

Chronic inhalation of certain levels of benzene causes blood disorders in humans; specifically, benzene affects bone marrow (the tissues that produce blood cells). Aplastic anemia, excessive bleeding, and damage to the immune system (by changes in blood levels of antibodies and loss of white blood cells) may develop. Increased incidence of leukemia (cancer of the tissues that form white blood cells) has been observed in humans who have been occupationally exposed to benzene.

1,3-Butadiene (Vinyl Ethylene)

1,3-butadiene has been identified as a carcinogen in California. The majority of 1,3-butadiene emissions come from incomplete combustion of petroleum-based fuels. Since the majority of 1,3-butadiene emissions are from incomplete combustion of gasoline and diesel fuels, CARB's 1990 adopted low-emission vehicle/Clean Fuels regulations and the 1996 Phase II reformulated gasoline regulations are expected to continue to reduce 1,3-butadiene emissions from cars and light-duty trucks as the fleet turns over and new low-emission vehicles are introduced into the fleet.

At very high levels, butadiene vapors cause neurological effects, such as blurred vision, fatigue, headache, and vertigo. Dermal exposure of humans to 1,3-butadiene causes a sensation of cold, followed by a burning sensation, which may lead to frostbite.

One epidemiological study reported that chronic (long-term) exposure to 1,3-butadiene by inhalation resulted in an increase in cardiovascular diseases, such as rheumatic and

arteriosclerotic heart diseases, while other human studies have reported effects on the blood. A large epidemiological study of synthetic rubber industry workers demonstrated a consistent association between 1,3-butadiene exposure and occurrence of leukemia. Several epidemiological studies of workers in styrene-butadiene rubber factories have shown an increased incidence of respiratory, bladder, stomach, and lymphato-hematopoietic cancers. However, these studies are not sufficient to determine a causal association between 1,3-butadiene exposure and cancer, due to possible exposure to other chemicals and other confounding factors.

Carbon Tetrachloride (Tetrachloromethane)

Carbon tetrachloride is a central nervous system depressant, which the USEPA has classified as Group B2 (probable human carcinogen). The primary sources of carbon tetrachloride in California include chemical and allied product manufacturers and petroleum refineries. Unlike many of the other TACs, carbon tetrachloride is emitted primarily by sources other than motor vehicles, and there are virtually no emissions within the MDAB or California.

Acute inhalation and oral exposures to high levels of carbon tetrachloride have been observed primarily to damage the liver (e.g., swollen, tender liver; changes in enzyme levels; jaundice) and kidneys (e.g., nephritis, nephrosis, proteinuria) of humans. Depression of the central nervous system has also been reported. Symptoms of acute exposure in humans include headache, weakness, lethargy, nausea, and vomiting. Delayed pulmonary edema (fluid in lungs) has been observed in humans who have been exposed to high levels of carbon tetrachloride by inhalation and ingestion, but this is believed to be due to injury to the kidney rather than direct action of carbon tetrachloride on the lung. Chronic inhalation or oral exposure to carbon tetrachloride produces liver and kidney damage in humans and animals.

Hexavalent Chromium

Hexavalent chromium emissions come mainly from electric generation, aircraft and parts manufacturing, and fabricated metal product manufacturing. In California, hexavalent chromium has been identified as a carcinogen. Epidemiological evidence suggests that exposure to inhaled hexavalent chromium may result in lung cancer.

The respiratory tract is the major target organ for chromium (VI) following inhalation exposure in humans. Other effects noted from acute inhalation exposure to very high concentrations of chromium (VI) include gastrointestinal and neurological effects, while dermal exposure causes skin burns in humans. Chronic inhalation exposure to chromium (VI) in humans results in effects on the respiratory tract, with perforations and ulcerations of the septum, bronchitis, decreased pulmonary function, pneumonia, asthma, and nasal itching and soreness reported. Chronic human exposure to high levels of chromium (VI) by inhalation or oral exposure may produce effects on the liver, kidney, gastrointestinal and immune systems, and possibly the blood.

Para-Dichlorobenzene

In California, para-dichlorobenzene has been identified as a carcinogen. In addition to the carcinogenic impact, long-term inhalation exposure may affect the liver, skin, and central nervous system in humans. Para-dichlorobenzene is a chlorinated aromatic hydrocarbon. It was first registered for use in the United States in 1942, and it is sometimes called

1,4-dichlorobenzene. It is a fumigant insecticide and repellent. Para-dichlorobenzene turns directly from a solid into a gas, a process called sublimation.

The primary sources of para-dichlorobenzene include consumer products such as nonaerosol insect repellents and solid/gel air fresheners.

People who have been exposed to para-dichlorobenzene have experienced nausea, vomiting, dizziness, fatigue, and headaches. Para-dichlorobenzene vapor can also irritate the eyes and nasal passages. It may also cause kidney and liver damage in pets.

Formaldehyde

Formaldehyde is both directly emitted into the atmosphere and formed in the atmosphere as a result of photochemical oxidation, which is the largest source of formaldehyde concentrations in California ambient air. Directly emitted formaldehyde is a product of incomplete combustion. One of the primary sources of formaldehyde is vehicular exhaust. Formaldehyde is also used in resins, fumigants, and soil disinfectants, and it can be found in many consumer products as an antimicrobial agent.

The major toxic effects caused by acute formaldehyde exposure via inhalation are eye, nose, and throat irritation and effects on the nasal cavity. Other effects seen from exposure to high levels of formaldehyde in humans are coughing, wheezing, chest pains, and bronchitis. Chronic exposure to formaldehyde by inhalation in humans has been associated with respiratory symptoms and irritation of the eye, nose, and throat. Animal studies have reported effects on the nasal respiratory epithelium and lesions in the respiratory system from chronic inhalation exposure to formaldehyde.

Occupational studies have noted statistically significant associations between exposure to formaldehyde and increased incidence of lung and nasopharyngeal cancer. This evidence is considered to be “limited,” rather than “sufficient,” due to possible exposure to other agents that may have contributed to the excess cancers. The USEPA considers formaldehyde to be a probable human carcinogen and has ranked it in Group B1 (probable human carcinogen). In California, formaldehyde has been identified as a carcinogen.

Methylene Chloride (Dichloromethane)

In California, methylene chloride has been identified as a carcinogen. In addition, chronic exposure can lead to bone marrow, hepatic, and renal toxicity. Methylene chloride is used as a solvent, a blowing and cleaning agent in the manufacture of polyurethane foam and plastic fabrication, and a solvent in paint stripping operations. The statewide trend for methylene chloride shows that by comparing the statewide average methylene chloride concentration for 1990–1992 to that for 2005–2007 the result is a 77% decrease in both concentration and health risk.

Case studies of methylene chloride poisoning during paint stripping operations have demonstrated that inhalation exposure to extremely high levels of methylene chloride can be fatal to humans. Acute inhalation exposure to high levels of methylene chloride in humans has affected the central nervous system including decreased visual, auditory, and psychomotor functions, but these effects are reversible once exposure ceases. Methylene chloride also

irritates the nose and throat at high concentrations. The major effects from chronic inhalation exposure to methylene chloride in humans are effects on the central nervous system, such as headaches, dizziness, nausea, and memory loss. In addition, chronic exposure can lead to bone marrow, hepatic, and renal toxicity. The USEPA considers methylene chloride to be a probable human carcinogen and has ranked it in Group B2. The State of California considers methylene chloride to be a carcinogen.

Perchloroethylene (Tetrachloroethylene)

In California, perchloroethylene (PRC) has been identified as a carcinogen. PRC vapors are irritating to the eyes and respiratory tract. Following chronic exposure, workers have shown signs of liver toxicity as well as kidney dysfunction and neurological disorders.

PRC is used as a solvent, primarily in dry cleaning operations. PRC is also used in degreasing operations, paints and coatings, adhesives, aerosols, specialty chemical production, printing inks, silicones, rug shampoos, and laboratory solvents. Areawide sources contribute approximately 35%. In comparing the statewide perchloroethylene concentration for 1990-1992 to that for 2005-2007 the result is an 84% decrease in both concentration and health risk.

Breathing PRC for short periods of time can adversely affect the human nervous system. Effects range from dizziness, fatigue, headaches, and sweating to incoordination and unconsciousness. Contact with PRC liquid or vapor irritates the skin, eyes, nose, and throat. These effects are not likely to occur at levels of PRC that are normally found in the environment.

Breathing PRC over longer periods of time can cause liver and kidney damage in humans. Workers exposed repeatedly to large amounts of PRC in air can also experience memory loss and confusion. Laboratory studies show that PRC causes kidney and liver damage and cancer in animals exposed repeatedly by inhalation and by mouth. Repeat exposure to large amounts of PRC in air may likewise cause cancer in humans.

Diesel Particulate Matter (DPM)

DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled engines contribute about 24% of the Statewide total, with an additional 71% attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about 5% of total DPM.

Diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde, and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any TAC evaluated by the California Office of Environmental Health Hazard Assessment (OEHHA). The CARB estimates that about 70% of the cancer risk that the average Californian faces from breathing TACs stems from diesel exhaust particles.

In its comprehensive assessment of diesel exhaust, the OEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers who were not exposed to diesel emissions. These studies provide strong

evidence that long-term occupational exposure to diesel exhaust increases the risk of lung cancer. Using information from the OEHHA's assessment, CARB estimates that diesel-particle levels measured in California's air in 2000 could cause 540 "excess" cancers (beyond what would occur if there were no diesel particles in the air) in a population of one million people over a 70-year lifetime. Other researchers and scientific organizations, including the National Institute for Occupational Safety and Health (NIOSH), have calculated cancer risks from diesel exhaust that are similar to those calculated by the OEHHA and CARB.

Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Diesel engines are a major source of fine-particle pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can reduce lung function in children. In California, diesel exhaust particles have been identified as carcinogens (OEHHA and American Lung Association of California [ALAC] 2001).

Polycyclic Aromatic Hydrocarbons (PAHs)

The term polycyclic aromatic hydrocarbons (PAHs) refers to a group of several hundred chemically related, environmentally persistent organic compounds of various structures and varied toxicity. Most of them are formed by a process of thermal decomposition (pyrolysis) and subsequent recombination (pyrosynthesis) of organic molecules. PAHs enter the environment through various routes and are usually found as a mixture containing two or more of these compounds, e.g., soot. They have been shown to cause carcinogenic and mutagenic effects and are potent immunosuppressants. Effects have been documented on immune system development. They are by-products of natural gas combustion.

Airborne Fungus (Valley Fever)

Coccidioidomycosis, often referred to as San Joaquin Valley Fever or Valley Fever, is one of the most studied and oldest known fungal infections. Valley Fever most commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI). CI spores are found in the top few inches of soil and the existence of the fungus in most soil areas is temporary. The cocci fungus lives as a saprophyte in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus "blooms" and forms many tiny spores that lie dormant in the soil until they are stirred up by wind, vehicles, excavation, or other ground-moving activities and become airborne. Agricultural workers, construction workers, and other people who work outdoors and who are exposed to wind and dust are more likely to contract Valley Fever. Children and adults whose hobbies or

sports activities expose them to wind and dust are also more likely to contract Valley Fever. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

About 60% of Valley Fever cases are mild and display flu-like symptoms or no symptoms at all. Of those who are exposed and seek medical treatment, the most common symptoms include fatigue, cough, loss of appetite, rash, headache, and joint aches. In some cases, painful red bumps may develop on the skin.

One important fact to mention is that these symptoms are not unique to Valley Fever and may be caused by other illnesses as well. Identifying and confirming this disease require specific laboratory tests such as: (1) microscopic identification of the fungal spherules in infected tissue, sputum, or body fluid sample; (2) growing a culture of CI from a tissue specimen, sputum, or body fluid; (3) detection of antibodies (serological tests specifically for Valley Fever) against the fungus in blood serum or other body fluids; and (4) administering the Valley Fever Skin Test (called coccidioidin or spherulin), which indicates prior exposure to the fungus (Valley Fever Center for Excellence [VFCE] 2019).

Valley Fever is not contagious and therefore cannot be passed on from person to person. Most of those who are infected would recover without treatment within 6 months and would have a lifelong immunity to the fungal spores. In severe cases, especially in those patients with rapid and extensive primary illness, those who are at risk for dissemination of disease, and those who have disseminated disease, antifungal drug therapy is used. The type of medication used and the duration of drug therapy are determined by the severity of disease and response to the therapy. The medications used include ketoconazole, itraconazole, and fluconazole in chronic, mild-to-moderate disease, and amphotericin B, given intravenously or inserted into the spinal fluid, for rapidly progressive disease. Although these treatments are often helpful, evidence of disease may persist, and years of treatment may be required (VFCE 2019).

The usual course of Valley Fever in healthy people is complete recovery within 6 months. In most cases, the body's immune response is effective, and no specific course of treatment is necessary. About 5% of cases of Valley Fever result in pneumonia (infection of the lungs), while another 5% of patients develop lung cavities after their initial infection with Valley Fever. These cavities occur most often in older adults, usually without symptoms, and about 50% of them disappear within 2 years. Occasionally, these cavities rupture, causing chest pain and difficulty breathing, and require surgical repair. Only 1% to 2% of those exposed who seek medical attention would develop a disease that disseminates (spreads) to other parts of the body other than the lungs (VFCE 2019).

Table 4.3-5, *Range of Valley Fever Cases*, presents the range of Valley Fever cases based on research conducted by the VFCE.

Table 4.3-5 Range of Valley Fever Cases

Infection Classification	Percent of Total Diagnosed Cases
Unapparent infections	60%
Mild to moderate infections	30%
Infections resulting in complications	5–10%
Fatal infections	<1%

Source: VFCE 2019.

Factors that affect the susceptibility to coccidioidal dissemination are race, sex, pregnancy, age, and immunosuppression. While there are no racial or gender differences in susceptibility to primary infection with coccidioidomycosis, differences in risk of disseminated infection do appear to exist. Men have a higher rate of dissemination than do women and several studies have shown that the rate of dissemination in African Americans and Filipinos is several times higher than in the rest of the U.S. population. Native Americans, Hispanics, and Asians may also have a higher rate of dissemination than the general population, but these population differences are not well defined (VFCE 2019).

The CI fungal spores are often found in the soil around rodent burrows, Indian ruins, and burial grounds. The spores become airborne when the soil is disturbed by winds, construction, farming, and soil-disturbing activities. This type of fungus is endemic to the southwestern United States and more common in Kern County. The ecological factors that appear to be most conducive to the survival and replication of the fungal spores are high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils. During drought years, the number of organisms competing with CI decreases, and the CI remains alive, but dormant. When rain finally occurs, the arthroconidia germinate and multiply more than usual because of a decreased number of other competing organisms. Later, the soil dries out in the summer and fall, and the fungi can become airborne and potentially infectious.

Asbestos

The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90–95% of all asbestos contained in buildings in the United States. Asbestos occurs in certain geologic environments that contain serpentinite and ultramafic rocks, which are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties associated with the Sierra Nevada foothills, Klamath Mountains, and Coast Ranges. According to information provided by the California Department of Conservation Division of Mines and Geology, the project site is not located in an area where naturally occurring asbestos is likely to be present (USGS 2014).

Asbestos can only adversely affect humans in its fibrous form and these fibers must be broken and dispersed into the air and then inhaled. During geological processes, the asbestos mineral can be crushed, causing it to become airborne. It also enters the air or water from the breakdown of natural deposits. Constant exposure to asbestos at high levels on a regular basis may cause

cancer in humans. The two most common forms of cancer are lung cancer and mesothelioma, a rare cancer of the lining that covers the lungs and stomach.

Coronavirus Disease 2019

Coronavirus Disease 2019 (COVID-19) is a new disease, caused by a novel (or new) human coronavirus that has not previously been seen in humans. The first known case of COVID-19 was confirmed in the United States on January 20, 2020 (Holshue et al. 2020). There are many types of human coronaviruses, including some that commonly cause mild upper-respiratory tract illnesses. COVID-19 is a respiratory illness that can spread from person to person. According to the Center for Disease Control (CDC), older adults and people who have severe underlying medical conditions like heart or lung disease or diabetes seem to be at higher risk for developing more serious complications from COVID-19 illness. Symptoms may appear 2 to 14 days after the exposure to the virus and may include, but are not limited to, fever or chills, cough, shortness of breath or difficulty breathing, fatigue, muscle or body aches, headache, loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, and diarrhea (CDC 2022). According to the CDC, COVID-19 is believed to spread between people who are in close contact with one another (within about 6 feet) through respiratory droplets produced when an infected person coughs, sneezes, or talks (CDC 2021). COVID-19 research and causality are still in the beginning stages. A nationwide study by Harvard University found a linkage between long-term exposure to PM_{2.5} (averaged from 2000 to 2016) as air pollution and statistically significant increased risk of COVID-19 death in the United States (Wu et al. 2020).

4.3.3 Regulatory Setting

In California, air quality is regulated by several agencies, including the USEPA, CARB, and local air districts, such as the EKAPCD. Each of these agencies develops rules and/or regulations to attain the goals or directives imposed upon them through legislation. Although USEPA regulations may not be superseded, some State and local regulations may be more stringent than Federal regulations. The project site is located within a portion of the MDAB under the jurisdiction of the EKAPCD.

Federal

U.S. Environmental Protection Agency Clean Air Act

The principal air quality regulatory mechanism on the Federal level is the CAA and, in particular, the 1990 amendments to the CAA and the NAAQS that it establishes. These standards identify levels of air quality for “criteria” pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The criteria pollutants include ozone, CO, NO₂ (which is a form of NO_x), SO₂ (which is a form of sulfur oxide [SO_x]), PM₁₀, PM_{2.5}, and lead. The USEPA also has regulatory and enforcement jurisdiction over emission sources beyond State waters (outer continental shelf), and those that are under the exclusive authority of the Federal government, such as aircrafts, locomotives, and interstate trucking. The USEPA’s primary role at the State level is to oversee the State air quality programs. The USEPA sets Federal vehicle and stationary source emission standards and oversees approval of all State Implementation Plans (SIPs) and provides research and guidance in air pollution programs.

The SIP is a State-level document that identifies all air pollution control programs within California that are designed to help the State meet the NAAQS.

As discussed previously and shown above in **Table 4.3-3, *National and California Ambient Air Quality Standards***, the USEPA has designated the portion of the MDAB where the project is located within Kern County as being in attainment or unclassified with respect to all NAAQS with the exception of the 8-hour ozone standard. Attainment defines the status of a given airshed with regard to NAAQS requirements. Airsheds not meeting these standards are classified as “nonattainment.”

Title V and Extreme Designation

Title V of the CAA, as amended in 1990, creates an operating permits program for certain defined sources. In general, owner/operators of defined industrial or commercial sources that emit more than 25 tons per year (tpy) of NO_x and ROG must process a Title V permit. In “Extreme Designation” areas, the definition of a major source, which requires Title V permitting changes from 25 tpy to 10 tpy. This change results in more businesses having to comply with Title V permitting requirements under the Extreme nonattainment designation.

Title V does not impose any new air pollution standards, require installation of any new controls on the affected facilities, or require reductions in emissions. Title V does enhance public and USEPA participation in the permitting process and requires additional record-keeping and reporting by businesses, which results in significant administrative requirements. The project will not emit NO_x or ROG above the applicable thresholds, and, therefore, will not be required to obtain a Title V permit.

State

California Air Resources Board California Clean Air Act

The CARB, a department of the California Environmental Protection Agency (CalEPA), oversees air quality planning and control throughout California by administering the SIP. Its primary responsibility lies in ensuring implementation of the 1989 amendments to the CCAA, responding to the Federal CAA requirements, and regulating emissions from motor vehicles sold in California. It also sets fuel specifications to further reduce vehicular emissions.

The amendments to the CCAA establish the CAAQS, and a legal mandate to achieve these standards by the earliest practical date. These standards apply to the same criteria pollutants as the Federal CAA, and also include sulfates, visibility-reducing particulates, hydrogen sulfide, and vinyl chloride (there are currently no NAAQS for these latter pollutants). They are also more stringent than the Federal standards in most cases, although recently promulgated NAAQS for 1-hour NO₂ and SO₂ can in some instances be more stringent than the respective CAAQS. As shown above in **Table 4.3-3, *National and California Ambient Air Quality Standards***, the Kern County portion of the MDAB is designated as nonattainment for the State ozone and PM₁₀ standards. Concentrations of all other pollutants are presumed to meet State standards as the area is designated as either attainment or unclassified.

The CARB is also responsible for regulations pertaining to TACs. The Air Toxics “Hot Spots” Information and Assessment Act (Assembly Bill [AB] 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program.

AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release into the air basin. Each air pollution control district (APCD) ranks the data into high-, intermediate-, and low-priority categories. When considering the ranking, the potency, toxicity, quantity, volume, and proximity of the facility to receptors are given consideration by an APCD.

The CARB also has on- and off-road engine emission-reduction programs that would indirectly affect the project's emissions through the phasing in of cleaner on- and off-road engines. Additionally, the CARB has a Portable Equipment Registration Program that allows owners or operators of portable engines and associated equipment to register their units under a Statewide program to operate their equipment, which must meet specified program emission requirements, throughout California, without having to obtain individual permits from local APCDs. Since the project is not proposing to install any applicable stationary sources, the AB 2588 program would not apply to the project.

In 2007, the CARB enacted a regulation for the reduction of DPM and criteria pollutant emissions from in-use off-road diesel-fueled vehicles (13 California Code of Regulations [CCR] Article 4.8, Chapter 9, Section 2449). This regulation provides target emission rates for particulate matter and NO_x emissions for owners of fleets of diesel-fueled off-road vehicles and applies to equipment fleets of three specific sizes, and the target emission rates are reduced over time.

California Renewable Portfolio Standard Program

Senate Bill (SB) 1078 established California's Renewable Portfolio Standard (RPS) program in 2002. The RPS program requires electrical corporations and electric service providers to purchase a specified minimum percentage of electricity generated by eligible renewable energy resources. The bill requires the California Energy Commission to certify eligible renewable energy resources, to design and implement an accounting system to verify compliance with the RPS by retail sellers, and to allocate and award supplemental energy payments to cover above-market costs of renewable energy. Under SB 1078, each electrical corporation was required to increase its total procurement of eligible renewable energy resources by at least 1% per year so that 20% of its retail sales were procured from eligible renewable energy resources.

In 2006 SB 107 accelerated the RPS program by establishing a deadline of December 31, 2010, for achieving the goal of having 20% of total electricity sold to retail customers in California per year generated from eligible renewable energy resources.

The RPS goal was increased to 33% when Governor Schwarzenegger signed Executive Order (EO) S-14-08 in November 2008. EO S-14-08 was later superseded by EO S-21-09 on September 15, 2009. EO S-21-09 directed the CARB to adopt regulations requiring that 33% of electricity sold in the State come from renewable energy by 2020. On September 23, 2010, the CARB approved a Renewable Electricity Standard regulation.

On April 12, 2011, the California Senate passed legislation paralleling and expressly superseding CARB's RPS program rules set forth on September 23, 2010. Pursuant to SB 1X-2, the statutory RPS was increased to 33% and expanded the RPS program to include customer-

owned utilities. In addition, SB 1X-2 limits the use of out-of-state tradable renewable energy certificates to 25% in 2013, 15% in 2016, and 10% thereafter.

On October 7, 2015, Governor Brown signed the Clean Energy and Pollution Act of 2015 or SB 350 that increased the RPS goal from 33% to 50% by 2030. The legislation also required local publicly owned electric utilities to establish annual targets for energy efficiency savings and demand reduction consistent with this goal.

Local

Kern County General Plan

The goals, policies, and implementation measures in the *Kern County General Plan* and the *Cameron Canyon Specific Plan* applicable to air quality as related to the project are provided below. The *Kern County General Plan* and the *Cameron Canyon Specific Plan* contain additional policies, goals, and implementation measures that are more general in nature and not specific to development such as the proposed project. Therefore, they are not listed below, but as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the *Kern County General Plan* and the *Cameron Canyon Specific Plan* are incorporated by reference.

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

1.10 General Provisions

1.10.2 Air Quality Element

Goals

- **Goal 1.** Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

Policies

- **Policy 18.** The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be placed on minimizing air quality degradation in the desert to enable effective military operations.
- **Policy 19.** In considering discretionary projects for which an EIR must be prepared pursuant to the California Environmental Quality Act (CEQA), the appropriate decision-making body, as part of its deliberations, will ensure that:
 - a. All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
 - b. The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the CEQA.

- **Policy 20.** The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Eastern Kern Air Pollution Control District on ministerial permits.
- **Policy 21.** The County shall support air districts' efforts to reduce PM₁₀ and PM_{2.5} emissions.
- **Policy 22.** Kern County shall continue to work with the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District toward air quality attainment with federal, State, and local standards.
- **Policy 23.** The County shall continue to implement the local government control measures in coordination with the Kern Council of Governments and the San Joaquin Valley Unified Air Pollution Control District.

Implementation Measures

- **Implementation Measure F.** All discretionary permits shall be referred to the appropriate air district for review and comment.
- **Implementation Measure G.** Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:
 - a. Minimizing idling time.
 - b. Electrical overnight plug-ins.
- **Implementation Measure H.** Discretionary projects may use one or more of the following to reduce air quality effects:
 - a. Pave dirt roads within the development.
 - b. Pave outside storage areas.
 - c. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
 - d. Use of alternative fuel fleet vehicles or hybrid vehicles.
 - e. Use of emission control devices on diesel equipment.
 - f. Residential fireplaces – Does not apply
 - g. Bicycle lockers – Does not apply
 - h. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
 - i. The use and development of park and ride facilities in outlying areas.
 - j. Other strategies that may be recommended by the local air pollution control districts.

Cameron Canyon Specific Plan

Section VII. Circulation Element

Goals

- **Goal 1.** To provide for the efficient movement of traffic into, out of, and through the Specific Plan area.

Policies

- **Policy 2.** Requirements for local streets shall be made as a development occurs.
- **Policy 5.** Road improvements will be required of developers as a condition of approval for all parcel maps, final map subdivisions, precise development (PD) plans, and conditional use permits (CUP's).

Implementation Standards

- **Implementation Standard 6.** Prior to any new road construction, the developer shall consult with the Tehachapi Resource Conservation District concerning methods for controlling soil erosion. The developer, public or private, shall implement the District's and appropriate County department's recommendations during construction, and afterward as may be recommended by the District and County.

Eastern Kern Air Pollution Control District

The project site, located in the MDAB portion of Kern County, is under the jurisdiction of the EKAPCD, which has regulatory authority over stationary source air pollution control and is responsible for implementing certain Federal CAA and CCAA programs and regulations. EKAPCD also maintains air quality plans to attain CAAQS and NAAQS. EKAPCD regulations that may apply to the proposed project include Regulation II (Permits), and Regulation IV (Prohibitions). The EKAPCD also identifies thresholds of significance against which project impacts are analyzed to determine whether a project will have a significant impact on air quality.

Air Quality Management Plan

As required by the federal and state CAA, air basins or portions thereof have been classified as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether or not the standards have been achieved. Jurisdictions of nonattainment areas also are required to prepare an air quality management plan (AQMP) that includes strategies for achieving attainment. The EKAPCD has adopted an attainment plan (2017 Ozone Attainment Plan for 2008 Federal 75 ppb 8- hour Ozone Standard [EKAPCD Ozone Plan]) for ozone pursuant to the Federal Clean Air Act, which serves as the District's Air Quality Management Plan. The EKAPCD Ozone Plan provided an update to the EKAPCD's 1994 Ozone Attainment Demonstration (Attainment Plan) and established a goal of being in attainment for the eight-hour NAAQS for ozone by the "Serious" classification deadline of December 31, 2020. On May 15, 2021, a request from EKAPCD was submitted to EPA by CARB requesting a voluntary reclassification of the nonattainment area from serious to severe. EPA approved this request for a voluntary reclassification effective on July 7, 2021, in the Federal Register Volume 86, page 30204. This redesignation requires that EKAPCD achieves attainment with the 2008 ozone NAAQS no later than July 20, 2027 (Trinity Consultants 2025).

Particulate matter (PM_{2.5} and PM₁₀) attainment strategies for NAAQS in Eastern Kern County have been subdivided into three areas: the Indian Wells Valley (IWV) area, the Kern River/Cummings Valley (KR/CV) area, and the remainder of the EKAPCD's jurisdiction, which includes the project site. The IWV and KR/CV zones are considered separate planning areas for PM_{2.5} and PM₁₀ and have their own attainment strategies. The remainder of the EKAPCD area, where the project is located, is designated unclassified/attainment for the NAAQS for PM_{2.5} and PM₁₀ standards. Therefore, the project site is not under the jurisdiction of any PM_{2.5} and PM₁₀ attainment plans. Although the project is located in an area that is attainment for NAAQS standards, the area is considered nonattainment for the CAAQS for 1-hour ozone, 8-hour ozone and PM₁₀. Air quality impacts are controlled locally through and provisions of EKAPCD, the Kern County General Plan, Cameron Canyon Specific Plan, and the Kern County Code of Building Regulations.

Eastern Kern Air Pollution Control District Regulations and Rules

The air pollution control agency for the Kern County portion of the MDAB is the EKAPCD. EKAPCD develops plans and implements control measures in their jurisdiction. These controls primarily affect stationary sources such as factories and plants. EKAPCD implements air quality programs required by state and federal mandates, enforces rules and regulations based on air pollution laws, and educates businesses and residents about their role in protecting air quality. EKAPCD is also responsible for managing and permitting existing, new, and modified sources of air emissions within the MDAB portion of Kern County.

EKAPCD has primary responsibility for regulating stationary sources of air pollution situated within its jurisdictional boundaries. EKAPCD established and enforces rules and regulations based on federal and state air pollution laws. Potentially applicable regulations and rules are discussed below.

Regulation II – Permits

List D addresses permit applications involving a TAC and provides risk management guidance for EKAPCD to determine compliance with EKAPCD Rules 419 and 423, parts of Regulation IV, Section 41700 and Division 26, Part 6 of the California Health and Safety Code, CARB's toxic air contaminant control program, and Title III of the 1990 Federal Clean Air Act Amendments. Health risk shall be determined following the most current California Air Pollution Control Officer's Association (CAPCOA) Air Toxics Hot Spots Program Risk Assessment Guidelines (OEHHA 2015).

Rule 201 (Permits Required)

EKAPCD Rule 201 establishes permitting requirements for stationary sources. Although the proposed project does not involve traditional stationary sources, on March 12, 2015, the EKAPCD adopted rules requiring projects to obtain Authority to Construct and Permit to Operate approval under Rule 201 to address fugitive dust emissions. Under Rule 201, these projects would be required to submit a Fugitive Dust Emissions Control Plan in accordance with Rule 402. In addition, the district is requiring a Fugitive Dust Emissions Monitoring Plan with a recommendation for each facility to install upwind and downwind particulate matter air monitoring, utilization of an Alternative Air Monitoring Strategy, or joining into the EKAPCD regional fugitive dust monitoring network. The monitoring will be used to demonstrate compliance with the District Rules and Regulations.

Rule 210.1 (New and Modified Stationary Source Review [NSR])

Rule 210.1 establishes stationary source offset levels for new and modified stationary sources of air pollutants. Under this rule, the EKAPCD has established required offsets for when the emissions from a source exceed the following trigger levels:

- PM₁₀ – 15 tons/year
- SO_x (as SO₂) – 27 tons/year
- VOCs – 25 tons/year
- NO_x (as NO₂) – 25 tons/year

Rule 401 – Visible Emissions

Rule 401 of the EKAPCD's rules and regulations addresses discharge into the atmosphere of visible emissions from any single source. Visible emissions are described by the EKAPCD as a plume of dust or exhaust created by human made or natural sources. A violation is a discharge for a period or periods aggregating more than 3 minutes in any 1 hour which is:

- A. As dark or darker in shade as designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
- B. Of such opacity as to obscure an observer's view to a degree equal to or greater that does smoke described in Subsection A (or 20 percent opacity).

Rule 402 – Fugitive Dust

Rule 402 of the EKAPCD's rules and regulations addresses significant human made dust sources from large operations. A large operation is defined as, "any active operation, including vehicle movement on unpaved roadways, on property involving in excess of 10 contiguous acres of disturbed surface area, or any earth-moving activity exceeding a daily volume of 7,700 cubic meters (10,000 cubic yards) three times during the most recent 365-day period." Rule 402 applies to specified bulk storage, earthmoving, construction and demolition, and human-made conditions resulting in wind erosion, and contains the following requirements:

1. A person shall not cause or allow emissions of fugitive dust from any active operation to remain visible in the atmosphere beyond the property line of the emission source, excluding unpaved roadways.
2. A person shall utilize one or more Reasonably Available Control Measures to minimize fugitive dust emissions from each source type that is part of any active operation, including unpaved roadways.
3. A person shall not cause or allow downwind PM₁₀ ambient concentrations to increase more than 50 µg/m³ above downwind concentrations as determined by simultaneous upwind and downwind sampling utilizing high-volume particulate matter samplers or other USEPA-approved equivalent method(s).
4. No person shall conduct a large operation without either: (1) conducting onsite PM₁₀ air quality monitoring and associated recordkeeping; or (2) filing for and obtaining an approved fugitive dust emission control plan.

Additionally, pursuant to Rule 402, an owner or operator of a Large Operation will be required to submit a Fugitive Dust Control Plan to the EKAPCD prior to the start of any earthmoving activity.

Rule 404.1 – Particulate Matter Concentrations – Desert Basin

Rule 404.1 pertains to Particulate Matter Concentrations – Desert Basin and states:

- A person shall not discharge into the atmosphere from any single source operation, in service on the date this Rule is adopted, particulate matter in excess of 0.2 grains per cubic foot of gas at standard conditions.
- A person shall not discharge into the atmosphere from any single source operation, the construction or modification of which commenced after the adoption of this Rule, particulate matter in excess of 0.1 grains per cubic foot of gas at standard conditions.

Rule 419 – Nuisance

Rule 419 states that a person shall not discharge from any source whatsoever such quantities of contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or that endanger the comfort, repose, health, or safety of such persons or the public or that cause or have a natural tendency to cause injury or damage to business or property.

Rule 423

Rule 423 adopts the EPA's National Emissions Standards for Hazardous Air Pollutants by reference, which grants EKAPCD the ability to ensure that all sources of hazardous air pollution would comply with applicable standards, criteria, and requirements set forth in Title 40, Chapter 1, Parts 61 and 63, of the Code of Federal Regulations that are in effect as of October 10, 2017.

Ozone Attainment Plan

In 2008, USEPA adopted a more stringent 8-hour ozone NAAQS of 0.075 ppm. Although the EKAPCD attained the 1997 8-hour ozone NAAQS, and the Indian Wells Valley planning area met the new (2008) ozone NAAQS, the EKAPCD's Design Value was higher than 0.075 ppm. In 2012, a portion of the EKAPCD was classified "marginal" nonattainment pursuant to the 2008, 8-hour Ozone NAAQS Air Quality Designations. However, EKAPCD failed to meet the 0.075 ppm standard by the applicable attainment date and was reclassified as "moderate" nonattainment, effective June 3, 2016. As a result, the EKAPCD was required to submit a SIP revision for the nonattainment area by January 1, 2017, which showed compliance with statutory and regulatory conditions applicable to the "moderate" designation (EKAPCD 2017).

The EKAPCD, in partnership with CARB, conducted photochemical modeling along with supplemental analyses to determine whether the EKAPCD could attain the 2008 ozone NAAQS by the "moderate" nonattainment deadline. Modeling indicated the EKAPCD would not meet the 0.075 ppm standard by the moderate deadline but could attain it by 2020, which is the attainment date for "serious" nonattainment areas. Pursuant to Section 181(b)(3) of the CAA "Voluntary Reclassification," EKAPCD requested CARB formally submit a request to USEPA asking for voluntary reclassification of EKAPCD from "moderate" to "serious"

nonattainment for the 2008, 8-hour ozone NAAQS, and revise the attainment date to December 31, 2020 (EKAPCD 2017). USEPA reclassified EKAPCD (except for the Indian Wells Valley planning area) as “serious” nonattainment on August 6, 2018 (USEPA 2018).

On May 15, 2021, a request from EKAPCD was submitted to EPA by CARB requesting a voluntary reclassification of the nonattainment area from serious to severe. EPA approved this request for a voluntary reclassification effective on July 7, 2021, in the Federal Register Volume 86, page 30204. This redesignation requires that EKAPCD achieves attainment with the 2008 ozone NAAQS no later than July 20, 2027 (Trinity Consultants 2025).

Air Quality Conformity Determination for Transportation Plans and Programs

The CAA Amendments of 1990 require a finding to be made stating that any project, program, or plan subject to approval by a metropolitan planning organization conforms to air plans for attainment of air quality standards. The Kern Council of Governments (Kern COG) is designated the Regional Transportation Planning Agency and Metropolitan Planning Organization for Kern County. In that capacity, Kern COG models air quality projections on population projections in conjunction with current general plan designations and estimated vehicle miles as well as the current Regional Transportation Plan (RTP) and the Federal transportation plan for Kern County. These results are compared to pollutant budgets for each basin approved by the USEPA in the 1999 base year. Kern County is contained within two air basins: San Joaquin Valley Air Basin (SJVAB) and the MDAB. Each air basin has its own plans and pollutant budgets. Kern COG makes conformity findings for each air basin.

The Federal Transportation Improvement Program (FTIP) for the Kern County region is a 6-year schedule of multimodal transportation improvements, and the RTP is a long-range, 26-year transportation plan. The conformity findings conclude that the FTIP and RTP result in emissions that are less than the emission budgets of baseline emissions for CO, VOC, NO_x, and PM₁₀ (Kern COG 2022).

4.3.4 Impacts and Mitigation Measures

This section describes the impact analysis relating to air quality for the proposed project. It describes the methods used to determine the impacts of the project and lists the thresholds used to conclude whether an impact would be significant. Where warranted, measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany an impact discussion.

Methodology

Because the Mojave Mine facility is an existing operation, this CEQA evaluation compares the change in emissions resulting from the proposed project to existing “baseline” emissions. Although CEQA anticipates that the baseline for a CEQA analysis normally consists of the physical environmental conditions as they exist when environmental review begins, CEQA and CEQA court decisions also recognize that alternative approaches to establishing baseline may be appropriate (Trinity Consultants 2025).

The baseline condition at the project site involves an existing vested mining and cement production operation and reclamation activities. Such activities are characterized by fluctuating production and associated air emissions, in response to continually changing market demands and other factors. An emission inventory that considers only conditions existing at the time of environmental review could substantially over- or under-represent typical conditions. Accordingly, baseline annual air pollutant emissions for the project air quality impact assessment are based on estimated emissions associated with annual average production levels at the site over the period from January 1, 2015, to December 31, 2020. This timeframe includes periods of relatively high production as well as relatively low production in response to changing market demands. Emissions from the cement plant have been quantified by the project proponent as part of the EKAPCD's Federal Operating Permit program and are reported to the EKAPCD annually (Trinity Consultants 2025).

Emissions estimates and modeling assumptions for baseline and project air pollutant emissions are discussed in more detail at **Impact 4.3-2**, below.

Thresholds of Significance

Kern County has adopted the following significance thresholds concerning air quality for projects located within the MDAB portion of Kern County. The thresholds for project emissions are as follows:

- 25 tons per year for ROG;
- 25 tons per year for NO_x;
- 15 tons per year for PM₁₀; and
- 25 tons per year for stationary sources (non-pollutant specific).

These standards are utilized in air quality analysis along with Federal and State guidelines for assessing air quality impacts. Kern County-adopted thresholds are defined for purposes of determining cumulative effects as the baseline for “considerable.”

Additionally, in order to be consistent with Federal guidance documents, actions that violate Federal standards for criteria pollutants (i.e., primary standards designed to safeguard the health of people considered to be sensitive receptors while outdoors and secondary standards designed to safeguard human welfare) are considered significant impacts, and actions that violate State standards developed by the CARB or criteria developed by the EKAPCD, including thresholds for criteria pollutants, are considered significant impacts. The EKAPCD's thresholds are presented below in **Table 4.3-6, EKAPCD Emission Thresholds**.

Table 4.3-6 EKAPCD Emission Thresholds

Criteria Pollutant Emission Thresholds	
Nitrogen Oxide (NO _x)	137 lbs./day (mobile); 25 tons/yr.
Reactive Organic Gases (ROG)	137 lbs./day (mobile); 25 tons/yr.
Sulfur Oxide (SO _x)	no daily limit; 27 tons/yr.
Particulate Matter (PM ₁₀)	no daily limit; 15 tons/yr.
Particulate Matter PM (2.5)	no daily limit; 15 tons/yr.
Toxic Air Contaminants (TACs) Thresholds¹	
TACs (Including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk $\geq$ 10 in 1 million. Hazard Index (project increment) 1.0 or greater.

Visibility

The CAAQS for VRP represents a policy judgment that a certain minimum degree of visibility is conducive to public welfare, regardless of location. This policy is manifested as a Statewide minimum dry air particle extinction limit of 0.23/kilometer (230 Mm⁻¹) averaged from 9:00 a.m. to 5:00 p.m. (PST) when Relative Humidity (RH) is less than 70%. This is roughly equivalent to $V_r = 10$ miles. The standard is 0.07/kilometer (70 Mm⁻¹) for the Lake Tahoe Air Basin (roughly equivalent to $V_r = 30$ miles). Equivalent PM₁₀ concentrations when this standard is just met range from about 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) for a fine particle dominated urban setting (e.g., Sacramento in the winter) to 90 or more $\mu\text{g}/\text{m}^3$ for a mixture of coarse and fine particles (e.g., Central Valley in the summer). The Lake Tahoe VRP limit equates to PM₁₀ concentrations ranging from about 16 to 25 $\mu\text{g}/\text{m}^3$ over a similar range of aerosol characteristics.

Health Risk-Based Thresholds

The OEHHA is responsible for setting health risk thresholds for air toxics. These thresholds include Reference Exposure Levels (RELs) for non-carcinogenic toxins that pose potential acute and/or chronic health risks and Unit Risk Factors (URFs) for carcinogens. The RELs and URFs represent exposure levels that OEHHA deems not likely to cause adverse effects in a human population, including sensitive receptors. These thresholds are based on the most recent scientific data and are designed to protect the most sensitive individuals in the population by inclusion of margins of safety. The thresholds approved by the EKAPCD are a potential to increase cancer risk for the person with maximum exposure potential by 10 in 1 million or a non-cancer Hazard Index greater than 1 for both acute and chronic exposure.

There are no thresholds of significance for Valley Fever that have been adopted by the State. However, the likelihood of its occurrence can be determined based on the proposed project location.

Kern County Environmental Checklist Thresholds

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA Guidelines, to determine if a project could potentially have a significant adverse effect related to air quality. The Kern County Environmental Checklist states that a

project would normally be considered to have a significant impact related to air quality if it would:

- a. Conflict with or obstruct implementation of the applicable air quality plan;
- b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard. Specifically, would implementation of the project (in a specific location) exceed any of the following adopted thresholds:

- ii. Eastern Kern Air Pollution Control District.

Operational and Area Sources:

Reactive Organic Gases (ROG): 25 tons per year.

Oxides of nitrogen (NO_x): 25 tons per year.

Particulate Matter (PM₁₀): 15 tons per year.

Stationary Sources - determined by District Rules: 25 tons per year.

- c. Expose sensitive receptors to substantial pollutant concentrations; or
 - d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Project Impacts

Impact 4.3-1: The project would conflict with or obstruct implementation of applicable air quality plans.

The project site is located within the administrative boundaries of the EKAPCD, which has jurisdiction over air quality in the Kern County portion of the MDAB. The EKAPCD has developed plans to attain Federal and State standards for ozone and particulate matter. The EKAPCD's air quality plans include emissions inventories to identify the sources and quantities of air pollutant emissions, evaluate how well different control methods have worked, and demonstrate how air pollution will be reduced. The plans also use computer modeling to estimate future levels of pollution to ensure that the MDAB will meet air quality goals. **Section 4.3.3, *Regulatory Setting***, discusses relevant air quality plans.

Eight-Hour Ozone Plan

A review of the EKAPCD 2017 Attainment Plan by Trinity Consultants (2025) demonstrates that the current project would not conflict with or obstruct implementation of the 2017 plan. Extension of the project schedule, absence of stationary combustion sources from the project and the minor changes in project-related area combustion sources (e.g., offroad vehicles) indicate that the existing conditions at the project site and surrounding areas will continue into the future. The project has no effect on population growth and the 2017 Attainment Plan contains no additional control measures with which the project may conflict. The project would continue implementing existing rules and fleet turnover which will reduce emissions from project sources as has occurred in the past. In summary, the project would not result in observable increase in ozone emissions over the existing environmental baseline and would not impact ozone attainment.

Additionally, the facility is not located in an area identified by EKAPCD as a disadvantaged community; therefore, there is not an applicable AB-617 Community Emissions Reduction Plan (CERP) that would apply to the project (Trinity Consultants 2025).

PM₁₀ and PM_{2.5}

Particulate matter (PM_{2.5} and PM₁₀) attainment strategies for NAAQS in Eastern Kern County have been subdivided into three areas: the Indian Wells Valley (IWV) area, the Kern River/Cummings Valley (KR/CV) area, and the remainder of the EKAPCD's jurisdiction, which includes the project site. The IWV and KR/CV zones are considered separate planning areas for PM_{2.5} and PM₁₀ and have their own attainment strategies. The remainder of the EKAPCD area, where the project is located, is designated unclassified/attainment for the NAAQS for PM_{2.5} and PM₁₀ standards. Therefore, the project site is not under the jurisdiction of any PM_{2.5} and PM₁₀ attainment plans.

Consistency with EKAPCD Applicable Rules

The proposed project will result in emissions from non-permitted sources (e.g., trucks, employee and contractor trips, onsite vehicles). Air pollutants will also be emitted during project activities. The following is a list of the EKAPCD rules that could potentially apply to the proposed project.

- Rule 201 (Permits Required)
- Rule 210.1 (New & Modified Stationary Source Review [NSR])
- Rule 210.2 (Standards for Permits to Operate)
- Rule 210.3 (Emission Reductions Banking)
- Rule 210.4 (Prevention of Significant Deterioration)
- Rule 210.5 (Visibility Protection)
- Rule 210.7 (Federal General Conformity Rule)
- Rule 210.8 (Federal Transportation Conformity)
- Rule 210.9 (Construction or Reconstruction of Major Stationary Sources of Hazardous Air Pollutants)
- Rule 301 (Permit Fees)
- Rule 301.4 (Greenhouse Gas Fee)
- Rule 401 (Visible Emissions)
- Rule 402 (Fugitive Dust)
- Rule 404.1 (Particulate Matter Concentration-Desert Basin)
- Rule 405 (Particulate Matter-Emission Rate)
- Rule 410 (Organic Solvents)
- Rule 410.1 (Architectural Coating Controls)
- Rule 410.2 (Disposal and Evaporation of Solvents)

- Rule 410.3 (Organic Solvent Degreasing Operations)
- Rule 411 (Storage of Organic Liquids)
- Rule 412 (Gasoline Transfer into Stationary Storage Containers, Delivery Vessels, and Bulk Plants)
- Rule 412.1 (Transfer of Gasoline into Vehicle Fuel Tanks)
- Rule 416 (Open Burning)
- Rule 419 (Nuisance)
- Rule 422 (Standards of Performance for New Stationary Sources [NSPS])

This evaluation is based on the quantified criteria pollutant thresholds used for assessing regional air quality impacts. The project must comply with the EKAPCD's rules and regulations and conform to all adopted mitigation measures to reduce those impacts.

Consistency with Kern County General Plan

Implementation of the project is consistent with the goals of the *Kern County General Plan* in providing an adequate and geographically balanced supply of land designated for a range of industrial purposes. With the exception of nine residences located within 2 miles of the project site, the proposed project is geographically isolated from sensitive uses; as such, the project promotes compatibility with land uses that may be affected by vested mining operations and project reclamation while simultaneously ensuring economic strength and well-being of Kern County and its residents without detriment to its environmental quality. In conclusion, the proposed project is consistent with the *Kern County General Plan* and will adhere to all EKAPCD rules and regulations necessary to ensure ongoing compliance with all adopted attainment plans.

Based on the factors discussed above, the potential for the project to conflict with or obstruct the implementation of an applicable air quality plan is less than significant. Nevertheless, to ensure project emissions are sufficiently controlled in accordance with applicable EKAPCD requirements, Mitigation Measures **MM 4.3-1**, **MM 4.3-2**, and **MM 4.3-3**, below, have been included to ensure the project complies with any applicable requirement of the EKAPCD. With implementation of the required mitigation measures, impacts are considered less than significant.

Mitigation Measures

MM 4.3-1 The project shall comply with any applicable requirement of the Eastern Kern Air Pollution Control District (EKAPCD).

MM 4.3-2 To control NO_x and PM emissions from the onsite equipment, the project proponent/operator and/or its contractor(s) shall continuously implement the following measures:

- a. Comply with the In-Use Off-road Diesel-Fueled Fleets Regulation.
- b. All equipment shall be maintained in accordance with the manufacturer's specifications.

- c. Heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 5 minutes. This mitigation measure does not apply to equipment that is subject to the CARB Off Road Diesel Vehicle regulations and the idling is when queuing; to verify that the vehicle is in safe operating condition; for testing, servicing, repairing or diagnostic purposes; necessary to accomplish work for which the vehicle was designed for; idling required to bring the machine system to operating temperature; or necessary to ensure safe operation of the vehicle.
- d. Notification shall be provided to trucks and vehicles in loading or unloading queues that engines shall be turned off when not in use for more than 5 minutes.
- e. Electric equipment shall be used to the extent feasible in lieu of diesel or gasoline-powered equipment.
- f. All heavy-duty equipment shall be in compliance with CARB Off-Road Diesel Regulations.
- g. On-road and off-road diesel equipment shall use diesel particulate filters (or the equivalent), if permitted under the manufacturer's guidelines.
- h. Existing electric power sources shall be used to the extent feasible. This measure would minimize the use of higher polluting gas or diesel generators.

MM 4.3-3

At least 30 days prior to commencement of reclamation activities, the project proponent shall amend/maintain a comprehensive Fugitive Dust Control Plan, which shall include:

- a. All soil being actively excavated or graded shall be sufficiently watered to prevent excessive dust. Watering shall occur as needed with complete coverage of disturbed soils areas. Watering shall take place a minimum of three times daily where soil is being actively disturbed, unless dust is otherwise controlled by rainfall or use of a dust suppressant.
- b. Vehicle speed for all on site (i.e., within the project boundary) vehicles shall be managed effectively to reduce fugitive dust. Signs identifying vehicle speed limits shall be posted along onsite roadways, at the site entrance/exit, and along unpaved site access roads.
- c. All onsite unpaved roads and offsite unpaved project-site access road(s) shall be effectively stabilized of dust emissions using water or EKAPCD-approved dust suppressants/palliatives, sufficient to prevent wind-blown dust exceeding 20 percent opacity at nearby residences or public roads. If water is used, watering shall occur sufficient to keep soil moist along actively used roadways. During the dry season, unpaved road surfaces and vehicle parking/staging areas shall be watered immediately prior to periods of high use (e.g., worker commute periods, truck convoys).
- d. The amount of the disturbed area (e.g., grading, excavation) shall be reduced and/or phased where possible.

- e. All disturbed areas shall be sufficiently watered or stabilized by EKAPCD-approved methods to prevent excessive dust. Watering frequency shall be increased whenever wind speeds exceed 15 mph or, as necessary, to prevent wind-blown dust exceeding 20 percent opacity at nearby residences or public roads.
- f. All grading, earth moving, and excavation activities shall cease during periods when dust plumes of 20 percent or greater opacity affect public roads or nearby occupied structures.
- g. All disturbed areas anticipated to be inactive for periods of 30 days or more shall be managed effectively to minimize wind-blown dust emissions.
- h. Where applicable, permanent dust control measures shall be implemented as soon as possible following the completion of any soil-disturbing activities.
- i. Stockpiles of dirt or other fine loose material shall be stabilized by watering or other appropriate methods sufficient to reduce visible dust emissions to a limit of 20 percent opacity. If necessary and where feasible, three-sided barriers shall be constructed around storage piles and/or piles shall be covered by use of tarps, hydro-mulch, woodchips, or other materials sufficient to minimize wind-blown dust.
- j. Water shall be applied prior to and during the demolition of onsite structures, as necessary, sufficient to minimize wind-blown dust.
- k. All on-road trucks hauling dirt, sand, soil, or other loose materials shall be covered or shall maintain at least six inches of freeboard (minimum vertical distance between top of the load and top of the trailer) in accordance with California Vehicle Code Section 23114.
- l. Gravel pads, grizzly strips, or other material track-out control methods approved for use by EKAPCD shall be installed where vehicles enter onto paved public roadways from unpaved roadways.
- m. On-road and off-road vehicles and equipment leaving the site shall be washed with water or high-pressure air, and/or rocks/grates at the project entry points shall be used, when necessary, to remove soil deposits and minimize the track-out/deposition of soil from unpaved roadways onto nearby paved public roadways.
- n. Portable equipment, 50 horsepower or greater, used during reclamation activities (e.g., portable generators) shall require California statewide portable equipment registration (issued by CARB) or an EKAPCD permit.
- o. The Fugitive Dust Control Plan shall identify a Fugitive Dust Complaint Coordinator for the proposed project. The Fugitive Dust Complaint Coordinator shall be responsible for responding to any complaints about dust from the project or haul trucks. The Fugitive Dust Complaint Coordinator shall determine the cause of the complaint and shall be required to implement reasonable measures to resolve the complaint.

Contact information for the Fugitive Dust Complaint Coordinator shall be submitted to the Kern County Planning and Natural Resources Department prior to commencement of reclamation activities as authorized by this approval.

- p. A sign, legible at a distance of 50 feet, shall be posted at the intersection of the project's Primary Access Road with Oak Creek Road prior to the commencement of reclamation activities. The sign shall state a Reclamation Plan has been approved for the site and include a telephone number where complaints can be registered with the Complaint Coordinator. Documentation that the sign has been posted shall be provided to the Kern County Planning and Natural Resources Department
- q. The designated Fugitive Dust Complaint Coordinator shall document any air quality complaints received. If necessary, the project operator and/or contractor will coordinate with EKAPCD to identify any additional feasible measures and/or strategies to be implemented to address public complaints.

Level of Significance After Mitigation

With implementation of Mitigation Measures **MM 4.3-1**, **MM 4.3-2**, and **MM 4.3-3**, impacts would be less than significant.

Impact 4.3-2: The project would result in a cumulatively considerable net increase of a criteria pollutant for which the project region is nonattainment under an applicable Federal or State ambient air quality standard.

The following thresholds of significance for criteria pollutants were adopted by the Kern County Air Pollution Control District Board of Directors in 1999 and remain applicable within the EKAPCD (EKAPCD, 1999). To determine if a proposed project has the potential to significantly impact the ambient air quality, the EKACPD utilizes the following net daily/annual emission increases as CEQA thresholds of significance. If the potential emissions exceed these thresholds, then the project may have a significant air quality impact:

- Nitrogen Oxide (NO_x): 137 lbs./day (mobile); 25 tons/year
- Reactive Organic Gases (ROG): 137 lbs./day (mobile); 25 tons/year
- Sulfur Oxide (SO_x): no daily limit; 27 tons/year
- Particulate Matter (PM₁₀): no daily limit; 15 tons/year
- Particulate Matter PM (PM_{2.5}): no daily limit; 15 tons/year

CEQA defines cumulative impacts as two or more individual effects which, when considered together, are either significant or “cumulatively considerable”, meaning they add considerably to a significant environmental impact. An adequate cumulative impact analysis considers a project over time and in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed. The EKAPCD Guidelines for Implementation of CEQA also states that “Unless otherwise specified in

published/adopted thresholds of significance and guidelines, a project's potential contribution to cumulative impacts shall be assessed utilizing the same significance criteria as those for project specific impacts” (EKAPCD 1999) (Trinity Consultants 2025).

By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development. Future attainment of State and Federal ambient air quality standards is a function of successful implementation of the EKAPCD’s attainment plans. Consequently, the EKAPCD and Kern County’s application of thresholds of significance for criteria pollutants is relevant to the determination of whether a project’s individual emissions would have a cumulatively significant impact on air quality (Trinity Consultants 2025).

A Lead Agency may determine that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program, including but not limited to an air quality attainment or maintenance plan that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (CCR §15064(h)(3)) (Trinity Consultants 2025).

Thus, if project emissions (i.e., change from baseline) exceed significance thresholds for NO_x or ROG, then the project would result in a cumulatively considerable net increase of a criteria pollutant for which the facility is located in an area that is non-attainment under applicable Federal or State AAQS. This means that if the project impact is less than those significance criteria, then the project contribution to the cumulative impact is not significant.

The project proponent maintains approximately 21 employees that work in mining operations, 16 of which are on site at a time. The existing facility is staffed 24 hours a day, seven (7) days a week. Hauling can generally occur at any time during the week, whereas portable crushing typically happens during daylight hours for up to ten (10) hours a day, up to seven days per week. Blasting generally occurs a maximum of two (2) times per day during daylight hours, for four (4) to six (6) days per week. Emissions modeling is based on 25 employees onsite and facility emissions were estimated to take place between the hours of 6 a.m. and 10 p.m. as a reasonably foreseeable window of operation based on daylight availability (Trinity Consultants 2025).

The project proponent utilizes portable off-road equipment for daily mineral resource recovery operations and will replace or repair equipment as needs change and in accordance with state or federal equipment specific requirements. Equipment typically utilized at the facility for excavation, processing, and transporting of materials includes that listed below (Trinity Consulting 2025):

- One (1) Komatsu WA900 loader;
- One (1) Cat 992G loader;
- Two (2) Cat 992K loader;
- Five (5) CAT 777G 100 Ton Haul Truck
- One (1) CAT 246B Skidsteer
- One (1) CAT MD6290 Drill
- One (1) ATLAS Copco DM65 Drill
- One (1) Kenworth Blend Truck

- One (1) CAT 770G Water Truck
- One (1) CAT 14M Grader
- One (1) CAT D9T Dozer
- One (1) CAT 352F Excavator
- Two (2) Ford Pickup F-250 Crew Cab
- One (1) Ford Pickup F-350 Crew Cab
- One (1) Chevrolet Pickup Crew Cab
- One (1) Toyota Tacoma Crew Cab

Project air pollutant and GHG emissions are those that result from reclamation activities that would occur under the proposed project. Reclamation activities include recontouring, stabilization, revegetation, and monitoring of final slopes and disturbed mining areas; reclamation of roads and ancillary equipment and facilities; and removal of processing facilities within the reclamation plan boundary upon the completion of surface mining operations. Reclamation does not include material handling associated with the movement of overburden material; however, emissions from reclamation activities are expected to be minimal when compared to overall material handling that occurs within the mining operations. Material handling emissions were chosen as a proxy for the project's reclamation emissions because the sources of emissions (bulldozing, scraping, and grading; wind erosion; dust entrainment from paved and unpaved roads; fuel dispensing; off road equipment exhaust; and on road vehicle exhaust from reclamation trips) necessarily include a smaller subset of sources of emissions that would come from reclamation activities alone. This estimate is conservative because it includes emissions from material and overburden handling associated with the underlying mineral recovery process, that go well beyond reclamation activities themselves (Trinity Consultants 2025).

Because the proposed project involves various phases of reclamation over several years and the rate of mining is influenced by market and other factors, daily and annual emissions fluctuate. For the purposes of comparison to baseline emissions (discussed below) and the EKAPCD maximum annual significance thresholds, a representative maximum emissions year was used as the basis of the proposed project emission calculations (Trinity Consultants 2025).

The majority of the equipment utilized in the project operations is equipment already being utilized at the facility or vehicles already coming onsite to export material. No new equipment is being proposed and the project includes the same types of activities and equipment use for operations that currently occur under baseline conditions (Trinity Consultants 2025).

Onsite project operations involve a variety of activities that emit air pollutants. These activities may be grouped as mobile sources, stationary sources, or fugitive sources. Fractions of the fugitive emissions from dust are PM₁₀ and PM_{2.5} emissions. Engine exhaust emissions include all pollutants and may be directly emitted at the project site, or emitted by vehicles in route to and from the project site, such as employee, material haul, and delivery vehicle trips (Trinity Consultants 2025).

Sources of operational emissions associated with the proposed project include the following:

- Bulldozing, scraping, and grading;
- Material handling;
- Wind erosion (active disturbed areas);

- Dust entrainment from paved and unpaved roads (on and off site);
- Fuel dispensing;
- Off road equipment exhaust; and
- On road vehicle exhaust (on and off site).

The project proponent expects to maintain the current production rate from the facility and maintain the current rate of reclamation in the future. As such, the representative maximum year for which the emission calculations are based is the year with the greatest amount of overburden moved onsite combined with emissions associated with ancillary reclamation activities. This approach of using a relatively high estimate of emissions from the proposed project (i.e., maximum production, highest emissions year) compared to the historical average baseline for the period from January 1, 2015, to December 31, 2020, results in a conservative (i.e., tending to overstate potential impacts as opposed to potentially understating impacts) estimate of the net change in emissions associated with the proposed project. This estimate encompasses emissions associated with reclamation activities, which include recontouring, stabilization, revegetation, and monitoring of final slopes and disturbed mining areas; reclamation of roads and ancillary equipment and facilities; and removal of processing facilities within the reclamation plan boundary upon the completion of surface mining operations (Trinity Consultants 2025).

The representative maximum year selected for this analysis is 2018, during which timeframe reclamation-related activities involved 2,754,684 tons of material handling. Combustion emissions were calculated using the emission factors available for the foreseeable future in EMFAC2021 (2050) and CalEEMod (2040). Over time, vehicles and diesel-fired equipment are expected to have more efficient, cleaner engines with lower emission rates. Project activities are expected to continue through the foreseeable future and so the emission factors selected are representative and likely conservative as the life of the project will extend beyond 2050 (Trinity Consultants 2025).

Additionally, while the project would not affect the Cement Plant's use permit, operating permits, or regulatory status, to present a complete baseline, Trinity Consultants' (2025) evaluation included baseline emission calculations for existing vested mining and Cement Plant operations for disclosure purposes. Sources of emissions associated with the current mining and cement plant operations include the following:

- Drilling and blasting;
- Cement Plant;
- Bulldozing, scraping, and grading;
- Material handling;
- Wind erosion (active disturbed areas);
- Dust entrainment from unpaved roads;
- Dust entrainment from paved roads;
- Fuel storage and dispensing;

- Off road equipment exhaust; and
- On road vehicle exhaust.

Emission factors and calculation methods used to quantify emissions from the proposed project and baseline are summarized below and are based on facility information and data available from the generally accepted public sources. Where available, local (EKAPCD and California) and recently developed emission factors were selected. In the absence of local emission factors, the most appropriate federal or international emission factor was applied (Trinity Consultants 2025).

Cement Plant. Emissions from the Cement Plant are estimated as the average of the Cement Plant emissions submitted to EKAPCD as a part of the annual emissions inventory during the baseline years. Emissions from sources associated with mining are excluded from this category and quantified separately.

Drilling and Blasting. Emissions from drilling and blasting are calculated based on the area per blast, explosives used, holes drilled, and number of blasts conducted along with emission factors from the Mojave Desert Air Quality Management District (MDAQMD) Emission Inventory Guidance: Mineral Handling and Processing Industries, Sections A-C. Drilling and blasting would continue to be conducted in conjunction with mining, however no drilling and/or blasting associated with reclamation activities would be conducted.

Bulldozing, Scraping, and Grading. Emissions from bulldozing, scraping, and grading are estimated based on the hours of operation for bulldozing, scraping, and grading equipment. Operating hours are calculated by scaling the Vehicle Miles Traveled (VMT) for reclamation and the VMT for limestone production with the hours of operation estimate for bulldozing, scraping, and grading from CalPortland. The emission factor is calculated in accordance with MDAQMD Emissions Inventory Guidance for Mineral Handling and Processing Industries, Section VI.D.

Material Handling. Material handling emissions are estimated based on the material throughput of overburden and limestone as well as the number of transfer points. Emission factors are determined in accordance with the MDAQMD Emissions Inventory Guidance for Mineral Handling and Processing Industries, Sections VI.D and VI.E. Control efficiencies for watering all transfer points are applied according to the MDAQMD Emissions Inventory Guidance for Mineral Handling and Processing Industries Section E, Table 5.

Wind Erosion (active disturbed areas). Wind erosion emissions are estimated based on the disturbed pile acreage along with non-road wind erosion emission factors according to the Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, EPA-450/2-92-004, September 1992, using windspeed and precipitation data from the Tehachapi Muni meteorological tower for the most recent complete set of data available (2010-2013). Particle size multipliers for PM10 and PM2.5 are from AP-42 Section 13.2.5. Control efficiencies for water sprays are applied per the Western Regional Air Partnership (WRAP) Fugitive Dust Handbook, AP 42, Section

13.2.2, and Bay Area Air Quality Management District (BAAQMD) Permit Handbook, respectively.

Dust entrainment from unpaved roads. Unpaved road dust emissions are estimated based on total miles traveled, average vehicle weight, and road silt content along with emission factors in pounds per mile calculated in accordance with AP-42 Section 13.2.2, Unpaved Roads. Control efficiencies from BAAQMD Permit Handbook Section 11.7 and Table 3-7 of the WRAP Fugitive Dust Handbook were applied for watering of unpaved roads and limiting speeds to below 15 mph, respectively.

Dust entrainment from paved roads. Paved road dust emissions are estimated based on total miles traveled, average vehicle weight, and road silt loading along with emission factors are calculated in accordance with AP-42 Section 13.2.1, Paved Roads. For onsite paved roads, controls for limiting vehicle speed to 15 mph or less and sweeping are applied from WRAP Fugitive Dust Handbook and MDAQMD Emission Inventory Guidance for Material Handling Industries, Section J. For off-site paved roads, no controls are assumed.

Fuel storage and dispensing. Fuel dispensing emissions are calculated based on fuel throughput estimated using an assumption of two fuel truck trips per day carrying 9,000-gallons of diesel fuel with a fuel dispensing emission factor comes from SCAQMD "Supplemental Instructions of Liquid Organic Storage Tanks" (February 2017) which assumes VOC = ROG. No controls are applied for fuel dispensing.

Off road equipment exhaust. Off-road equipment emissions are calculated based on engine horsepower, model year, hours of operation, and load factor. Load factors and emission factors from CalEEMod Version 2016.3.1 are chosen based on vehicle model year. No add-on controls are used for vehicle fuel combustion of off-road vehicles.

On road vehicle exhaust. On-road equipment emissions are calculated based on vehicle miles traveled. Emission factors are calculated in ARB's EMFAC 2021 model as the average of each vehicle and fuel type for the baseline or project years for Kern County. No add-on controls are used for vehicle fuel combustion of off-road vehicles.

Cement Plant Demolition. The cement plant demolition is assumed to be completed in three phases: Phase 1 - Equipment and structures demolition (300 days), Phase 2 - Site preparation (100 days, occurring concurrently with Phase 3), and Phase 3 - Site restoration (100 days, occurring concurrently with Phase 2). Demolition emissions are expected from the following sources:

- Mechanical dismemberment;
- Debris loading;
- Grading;
- Bulldozing;
- Truck Loading;
- Off road equipment exhaust;

- Concrete and brick crushing;
- Dust entrainment from unpaved roads;
- Dust entrainment from paved roads;
- Fuel dispensing; and
- On road vehicle exhaust (on and off site).

The calculation methods utilized for estimating the cement plant demolition emissions are summarized below and detailed in Trinity Consultants 2025.

Mechanical or Explosive Dismemberment. Emissions from mechanical or explosive dismemberment are calculated in CalEEMod (v2022.1). The calculation inputs are the estimated weight of demolition debris provided to Trinity Consultants by the project proponent, default material moisture content from CalEEMod, and mean wind speed based on the project location from CalEEMod. Drilling and blasting would continue to be conducted in conjunction with mining, however no drilling and/or blasting associated with reclamation activities would be conducted.

Debris Loading. Dust emissions from loading demolition debris are calculated in CalEEMod (v2022.1) using the default loading TSP emission factor from CalEEMod. The calculation input is the estimated weight of demolition debris provided by the project proponent.

Grading. Dust emissions from grading are calculated in CalEEMod (v2022.1). The calculation inputs are the acreage of the grading site, the CalEEMod default blade width of the grading equipment, and CalEEMod default mean vehicle speed. The acreage of the grading site and blade width are used to calculate the VMT of the grading equipment.

Bulldozing. Dust emissions from bulldozing are calculated in CalEEMod (v2022.1). The calculation inputs are the CalEEMod default material moisture content and silt content and constants associated with overburden from AP-42 Section 11.9, Western Surface Coal Mining.

Truck Loading. Dust emissions from truck loading are calculated in CalEEMod (v2022.1). The calculation inputs are the estimated weight of demolition debris provided by the project proponent, default material moisture content from CalEEMod, and mean wind speed based on the project location from CalEEMod.

Off road equipment exhaust. Off-road equipment emissions are calculated in CalEEMod (v2022.1) based on the demolition site size and the construction phases selected in CalEEMod. The calculation inputs are CalEEMod default load factors and horsepower for each equipment. All equipment is assumed to be diesel-fired. No add-on controls are used for vehicle fuel combustion of off-road vehicles. Calendar years 2049 and 2050 are used to model the demolition project schedule since CalEEMod has a maximum end date of 12/31/2050. Use of 2049 and 2050

emission factors are conservative since the cement plant is expected to be demolished in approximately 200 years.

Concrete and Brick Crushing. Potential fugitive dust emissions from concrete and brick crushing are estimated based on the weight of material demolished from structures at the cement plant and an operating schedule of 8 hours per day for 100 days. Concrete and brick crushing is expected to occur during Demolition Phase 2 using a concrete breaker affixed to mobile equipment. Emissions from crushing are based on the controlled tertiary crushing emission factor in AP-42 Section 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing. Off-road equipment exhaust emissions for crushing assume the crusher is powered by a Tier 4 engine firing ultra-low sulfur diesel. Emissions are calculated using a representative crusher's horsepower and the Tier 4 nonroad engine standards.

Dust entrainment from unpaved roads. Unpaved road dust emissions are estimated based on total miles traveled, average vehicle weight, and road silt content along with emission factors in lbs/mile calculated in accordance with AP-42 Section 13.2.2, Unpaved Roads. A control efficiency from BAAQMD Permit Handbook Section 11.7 was applied for watering of unpaved roads.

Dust entrainment from paved roads. Paved road dust emissions are estimated based on total miles traveled, average vehicle weight, and road silt loading along with emission factors are calculated in accordance with AP-42 Section 13.2.1, Paved Roads. For onsite paved roads and off-site paved roads, no controls are assumed to be conservative.

Fuel storage and dispensing. Fuel dispensing throughputs for off-road equipment are estimated based on the brake-specific fuel consumption (BSFC) in EPA's Final Regulatory Analysis: Control of Emissions from Nonroad Diesel Engines (May 2004) by equipment horsepower, the CalEEMod default horsepower for each equipment type, and the demolition phase operating schedule. Fuel dispensing throughput for the mobile concrete breaker engine is calculated based on a representative engine's fuel consumption rate and the demolition phase operating schedule. The fuel dispensing emission factor comes from SCAQMD "Guidelines for Fuel Dispensing Operations" (December 2024) and the assumption VOC = ROG. No controls are applied for fuel dispensing.

On road vehicle exhaust. On-road equipment emissions are calculated based on vehicle miles traveled. Emission factors are calculated in ARB's EMFAC 2025 model as the average of each vehicle and fuel type for 2050 for Kern County, which is the closest year to the cement plant demolition projected to occur in approximately 200 years. No add-on controls are used for vehicle fuel combustion of off-road vehicles.

Table 4.3-7, Net Operational Emissions (Comparison of Project Emissions to Baseline Emissions), summarizes and compares criteria pollutant emissions for the baseline emissions scenario and the project emissions scenario to thresholds of significance. The net increase in emissions specifically attributable to the project when compared against baseline emissions is

shown as net emissions. As shown in the table, the project will not result in a net increase in criteria air pollutant emissions in excess of EKAPCD thresholds of significance (Trinity Consultants 2025) and this impact would be less than significant.

Table 4.3-7 Net Annual Operational Emissions (Comparison of Project Emissions to Baseline Emissions)

Description	Tons per Year					
	PM ₁₀	PM _{2.5}	CO	NO _x	ROG	SO _x
Baseline Emissions	281.87	10.67	567.5	1,712.61	31.87	483.4
Project Emissions	294.25	11.77	566.96	1,689.95	33.51	484.10
Net Emissions	12.38	1.11	- 0.54	- 22.67	1.64	0.70
EKAPCD/Kern County Significance Threshold ^a	15.0	15.0	N/A	25.0	25.0	27
Significance Threshold Exceeded?	No	N/A	N/A	No	No	N/A

Source: Trinity Consultants 2025, Table 3-16.

Notes:

Trinity Consultants 2025, Table 3-12 provides *Baseline Criteria Pollutant Estimates* and Table 3-13 provides *Total Project (Continuing Mining, Reclamation, and Cement Plant Scenario) Criteria Pollutant Emissions*, from which data are used to calculate net emissions presented here.

Compliance with EKAPCD rules and CARB's Off-Road Diesel Vehicle regulations would further reduce emissions. These rules include but are not limited to the following:

Rule 401. Rule 401 states that a person shall not discharge into the atmosphere, from any single source of emission, any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

1. As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or
2. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in Subsection A of the rule.

Rule 402. The purpose of Rule 402 is to reduce the amount of PM₁₀ from significant manmade fugitive dust sources from large operations and in an amount sufficient to maintain National Ambient Air Quality Standards. A large operation is defined as "any active operation, including vehicle movement on unpaved roadways, on property involving in excess of 10 contiguous acres of disturbed surface area, or any earth-morning activity exceeding a daily volume of 7,700 cubic meters (10,000 cubic yards) three (3) times during the most recent 365-day period." This rule shall apply to specified bulk storage, earthmoving, construction and demolition, and man-made conditions resulting in wind erosion. Rule 402 includes the following requirements:

- a) A person shall not cause or allow emissions of fugitive dust from any active operation to remain visible in the atmosphere beyond the property line of the emission source. This Subsection shall not apply to unpaved roadways.
- b) A person shall utilize one (1) or more Reasonably Available Control Measures to minimize fugitive dust emissions from each fugitive dust source type which is part of any active operation subject to this Rule, including unpaved roadways.
- c) For any large operation, except those satisfying Subsection V.D.3. (implementation of RACM's), a person shall not cause or allow downwind PM₁₀ ambient concentrations to increase more than 50 micrograms per cubic meter above upwind concentrations as determined by simultaneous upwind and downwind sampling. High-volume particulate matter samplers, or other EPA-approved equivalent method(s) for PM₁₀ monitoring shall be used.
- d) No person shall conduct or authorize conducting a large operation subject to requirements of this Rule without either: (1) conducting onsite PM₁₀ air quality monitoring and associated recordkeeping, or (2) filing for and obtaining an approved fugitive dust emissions control plan pursuant to Subsection V.D.3.

Dust control measures to be implemented onsite are required to be consistent with EKAPCD Regulation IV rules.

As discussed above, project emissions would not exceed Kern County thresholds of significance for any criteria pollutant. Although emissions are predicted to be below the thresholds of significance, the Lead Agency considers the project emissions related to fugitive dust to be potentially significant and has included Mitigation Measures **MM 4.3-1**, **MM 4.3-2**, and **MM 4.3-3**, above, and **MM 4.3-4**, below, to ensure impacts would be less than significant. With implementation of the required mitigation measures, impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures **MM 4.3-1** through **MM 4.3-3**.

MM 4.3-4 Surface disturbance shall be kept to a minimum in advance of mining. At such time as surface mining or associated activities have been completed on an area of disturbed land, reclamation efforts shall be initiated on those portions of the disturbed lands that will not be subject to further disturbance by the surface mining operation or its associated activities.

Level of Significance After Mitigation

With implementation of Mitigation Measures **MM 4.3-1** through **MM 4.3-4**, impacts would be less than significant.

Impact 4.3-3: The project would expose sensitive receptors to substantial pollutant concentrations.

Determination of whether project emissions would expose sensitive receptors to substantial pollutant concentrations is a function of assessing potential health risks. Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are

especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. When evaluating whether a project has the potential to result in localized impacts, the nature of the air pollutant emissions, the proximity between the emitting facility and sensitive receptors, the direction of prevailing winds, and local topography must be considered.

A Health Risk Assessment (HRA) was performed as detailed in Trinity Consultants (2025) to evaluate the effects of TACs including DPM from vehicles and various substances found in fugitive dust emissions. As the activities generating emissions in the baseline and proposed project are not identical in location, the emissions from the baseline are represented as negative and the emissions from the project are represented as positive in the risk evaluation. Health risks from the project at the point of maximum impact (PMI), the maximally exposed individual resident (MEIR), and the maximally exposed individual worker are presented in **Table 4.3-8, Summary of HRA Results**, which shows impacts would be less than significant. The location of the receptors referenced in **Table 4.3-8** in relationship to the project site are shown on Figures 3-5 through 3-9 of the Air Quality and Greenhouse Gas Assessment Mojave Life of Mine Reclamation Plan Amendment (Trinity Consultants 2025).

Table 4.3-8 Summary of HRA Results

Receptor	Cancer		Chronic		Acute	
	Receptor ID	Risk	Receptor ID	Hazard Index	Receptor ID	Hazard Index
PMI	139	1.24	139	0.07	1,508	0.35
MEIR	2,153	< 0.0	2,153	< 0.01	2,153	< 0.01
MEIW	3	< 0.0	2,561	< 0.01	2,561	< 0.01
Significance Threshold ^a	--	10	--	1.0	--	1.0
Significance Threshold Exceeded?	--	No	--	No	--	No

Source: Trinity Consultants 2025, Table 3-17.

Notes:

1. Per the EKAPCD Guidelines for the Implementation of CEQA, health impacts may not exceed the EKAPCD thresholds for public notice. As such, project health impacts are evaluated against EKAPCD public notice thresholds for toxic health impacts set by EKAPCD AB 2588 requirements as listed in the EKAPCD 2019 Annual AB 2588 Air Toxics Report published September 3, 2020.

Cancer burden is an additional metric which may be evaluated for health impacts resulting from a project and evaluates the cancer risk to the surrounding residential population falling within the one in one million isopleth. As demonstrated by **Table 4.3-8, Summary of HRA Results**, the cancer risk to all surrounding residential receptors is shown to decrease as a result of the project. This is because TACs emissions associated with the project are expected to decrease compared to the baseline vested mining and cement production operation and reclamation activities. As there are no residences within the one in one million isopleth, an evaluation of cancer burden was not conducted (Trinity Consultants 2025).

Since the MEIR remained below the significance threshold for each risk category, the project would not have an adverse health effect on any of the surrounding communities (Trinity Consultants 2025).

The potential health risk attributable to the proposed project is determined to be less than significant based on the following conclusions:

1. Potential carcinogenic risk from the proposed project is below the significance level of ten in a million at each of the modeled receptors; and
2. The hazard index for the potential chronic non-cancer risk from the proposed project is below the significance level of 1.0 at each of the modeled receptors.
3. The hazard index for the potential acute non-cancer risk from the proposed project is below the significance level of 1.0 at each of the modeled receptors.

Therefore, potential risk to the population attributable to emissions of HAPs from the proposed project would be less than significant (Trinity Consultants 2025).

CO Hotspots

A CO “hotspot” can occur when vehicles are idling at highly congested intersections. CO hotspots can adversely affect nearby sensitive receptors. The Kern County Planning and Natural Resources Departments, Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports (2006) states that CO hotspots must be analyzed when one of the following conditions occur: (a) a project increases traffic at an intersection or roadway that operates at a Level of Service (LOS) E or worse; (b) a project involves adding signalization and/or channelization to an intersection; or (c) sensitive receptors such as residences, schools, hospitals, etc., are located in the vicinity of the affected intersection or signalization.

The proposed project is not located in the vicinity of an intersection operating at level of service (LOS) E or worse. The project trip generation (discussed further in **Section 4.15, Transportation**, is not anticipated to have the potential to cause a decrease the LOS of any intersection in the project vicinity. Additionally, as shown in **Table 4.3-7, Net Operational Emissions (Comparison of Project Emissions to Baseline Emissions)**, the net change in CO emissions is shown to decrease as a result of the project (Trinity Consultants 2025). Therefore, impacts would be less than significant, and a CO hotspot analysis is not required.

Valley Fever

The project has the potential to generate fugitive dust and suspend Valley Fever spores with the dust that could then reach nearby sensitive receptors. It is possible that onsite workers could be exposed to Valley Fever as fugitive dust is generated as a result of the project. The project would be required to comply with EKAPCD Rule 402, and the project proponent would be required to submit a Fugitive Dust Control Plan to the EKAPCD and implement fugitive dust control measures, which would reduce fugitive dust impacts to less than significant for all phases of the project and would also control the potential release of the *Coccidioides immitis* fungus from project activities. This requirement is included in Mitigation Measure **MM 4.3-3**; however, exposure to the *Coccidioides immitis* fungus would be potentially significant and Mitigation Measure **MM 4.3-5** is provided to further reduce impacts associated with Valley

Fever and to protect onsite workers and nearby receptors. Therefore, the exposure to Valley Fever would be minimized and impacts would be reduced to less-than-significant levels with implementation of the mitigation measures identified above.

Asbestos

Naturally occurring asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading of development projects, and at mining operations.

Serpentine and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties associated with the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. However, according to information provided by the California Department of Conservation Division of Mines and Geology, the project site is not in an area likely to contain ultramafic rock or naturally occurring asbestos (California Department of Conservation 2000). Additionally, the project is not located in a geographic ultramafic rock unit as defined in 17 CCR § 93106(i)(9) (Trinity Consultants 2025). Therefore, impacts associated with exposure of onsite workers and nearby sensitive receptors to asbestos would be less than significant.

COVID-19

Mitigation Measure **MM 4.3-6** is provided to further reduce impacts associated with COVID-19 by requiring a COVID-19 Health and Safety Plan to be prepared in accordance with the Kern County Public Health Services Department and Kern County Health Officer mandates. Additionally, Mitigation Measure **MM 4.3-7** is provided to require one-time fee to be paid to the Kern County Public Health Services Department for public awareness programs, which potentially may be allocated in whole or in part towards COVID-19 public awareness programs.

Mitigation Measures

Implement Mitigation Measures **MM 4.3-1** through **MM 4.3-4**.

MM 4.3-5 At least 30 days prior to commencement of reclamation activities, to minimize personnel and public exposure to potential Valley Fever–containing dust on and off site, the following control measures shall be implemented:

- a. Equipment, vehicles, and other items shall be thoroughly cleaned of dust before they are moved offsite to other work locations.
- b. Wherever possible, grading shall be phased so that earth-moving equipment is working well ahead or downwind of workers on the ground.
- c. The area immediately behind grading equipment shall be sprayed with water before ground workers move into the area.

- d. In the event that a water truck runs out of water before dust is sufficiently dampened, ground workers exposed to dust shall leave the area until a truck can resume water spraying.
- e. To the greatest extent feasible, heavy-duty earth-moving vehicles shall be closed-cab and equipped with a HEPA-filtered air system.
- f. Workers shall receive training in procedures to minimize activities that may result in the release of airborne *Coccidioides immitis* (CI) spores and recognize the symptoms of Valley Fever and shall be instructed to promptly report suspected symptoms of work-related Valley Fever to a supervisor. Evidence of training shall be provided to the Kern County Planning and Natural Resources Department within 5 days of the training session.
- g. A Valley Fever informational handout shall be provided to all onsite personnel and surrounding residences within 1000 feet of the project site. The handout shall, at a minimum, provide information regarding symptoms, health effects, preventative measures, and treatment of Valley Fever. At least 30 days prior to commencement of reclamation activities, this handout shall be mailed to all existing residences within 1000 feet of the project boundaries. Additional information and handouts can be obtained by contacting the Kern County Public Health Services Department.
- h. Onsite personnel shall be trained on the proper use of personal protective equipment, including respiratory equipment. National Institute for Occupational Safety and Health-approved respirators shall be provided to onsite personnel, upon request. When exposure to dust is unavoidable, affected workers shall be provided appropriate NIOSH-approved respiratory protection. If respiratory protection is deemed necessary, employers must develop and implement a respiratory protection program in accordance with the California Occupational Safety and Health Administration's Respiratory Protection standard (8 CCR 5144).

MM 4.3-6 At least 30 days prior to commencement of reclamation activities, a COVID-19 Health and Safety Plan shall be prepared in accordance with the Kern County Public Health Services Department and Kern County Health Officer mandates. A copy of the COVID-19 Health and Safety Plan shall be submitted to the Kern County Planning and Natural Resources Department to be kept on file.

MM 4.3-7 Within 30 days of the effective date of approval, a one-time fee shall be paid to the Kern County Public Health Services Department in the amount of \$3,200 for public awareness programs.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.3-1** through **MM 4.3-7**, impacts would be less than significant.

Impact 4.3-4: The project would result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact and the variety of odor sources, there are no quantitative or formulaic methodologies to determine the presence of a significant odor impact. EKAPCD Rule 208.2 (Criteria for Finding of No Significant Environmental Impact [California Environmental Quality Act]) states that there is “no possibility that the activity may have a significant impact” if a number of criteria are met, including compliance with all applicable EKAPCD Rules and Regulations. The project is expected to comply with EKAPCD Rule 419 (Nuisance) which states:

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

The intensity of an odor source’s operations and its proximity to sensitive receptors influences the potential significance of odor emissions. Diesel and gasoline exhaust from mobile equipment/vehicles has a slight odor. Odor intensity would decrease rapidly with distance and is not expected to be frequently (or at all) detectable at locations outside of the project site boundary. Given the large site upon which the diesel and gasoline engines will traverse, and the fact that the existing mining operation produces emissions up to the levels currently proposed without receiving odor complaints; the project would result in a less than significant impact (Trinity Consultants 2025).

Mitigation Measures

Mitigation is not required.

Level of Significance After Mitigation

Less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

The current nonattainment status of regional pollutants is determined by past development and present activities. The EKAPCD’s attainment plans are designed to ensure the future attainment of Federal or State ambient air quality standards. Consequently, the EKAPCD’s application of thresholds of significance for emission of criteria pollutants determines whether a project’s emissions would have a cumulatively considerable contribution of emissions of a criteria pollutant for which the EKAPCD is in nonattainment. If project emissions exceed the thresholds of significance for criteria pollutants, the project would be expected to result in a considerable net increase of any criteria pollutant for which the EKAPCD is in nonattainment under applicable Federal or State ambient air quality standards. The portion of the MDAB within EKAPCD jurisdiction is in nonattainment for PM_{2.5}, PM₁₀, and ozone. Ozone is addressed by examining its precursors which are NO_x, ROG, and CO.

As discussed above at **Impact 4.3-2** and presented above in **Table 4.3-7**, *Net Annual Operational Emissions (Comparison of Project Emissions to Baseline Emissions)*, project criteria pollutant emissions would be well below the significance thresholds established by the EKAPCD and the County. The proposed project would not exceed the EKAPCD or Kern County significance thresholds and would be conditioned to comply with current EKAPCD rules and regulations to minimize impacts to air quality as discussed herein. Further, as discussed at **Impact 4.3-3**, the project is not expected to cause or substantially contribute to significant human health effects associated with criteria air pollutants, toxic air contaminants, CO “hot spots”, valley fever, or asbestos. Therefore, the proposed project is not anticipated to generate significant impacts or generate significant criteria pollutant emissions. As such, cumulative air quality impacts are anticipated to be less than significant.

Mitigation Measures

Implement Mitigation Measures **MM 4.3-1** through **MM 4.3-7**.

Level of Significance After Mitigation

With implementation of Mitigation Measures **MM 4.3-1** through **4.3-7**, cumulative impacts would be less than significant.

Section 4.4

Biological Resources

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4.4.1 Introduction

This section of the Environmental Impact Report (EIR) describes effects on biological resources that would result from implementation of the project. In addition, although not part of the project, this section discusses potential effects that would result from ongoing vested mining activities to allow responsible agencies with ancillary permitting authority to rely on this EIR as appropriate. The following discussion addresses existing environmental conditions in the affected area, identifies and analyzes environmental impacts for the project, and recommends measures to reduce or avoid significant impacts anticipated from project construction and operation. In addition, existing laws and regulations relevant to biological resources are described. In some cases, compliance with these existing laws and regulations would serve to reduce or avoid certain impacts that might otherwise occur with the implementation of the project.

The proposed project is a reclamation plan amendment that would provide for reclamation of mined lands following completion of the project proponent's ongoing vesting mining operations. However, this biological resources analysis considers the impacts of ongoing vested mining and reclamation within the project site for purposes of disclosure and regulatory agency review and permitting.

The information in this section is based on the following (included in Appendix D of this EIR), which were prepared by the project proponent and peer reviewed by the EIR consultant before use in this EIR:

- *Baseline Biological Survey Report Mojave Life of Mine Reclamation Plan Amendment*, prepared by RCA Associates, Inc. Revised November 2025 (RCA 2025), included as Appendix D.1;
- *CalPortland's Mojave Life of Mine Reclamation Plan Amendment Delineation of State and Federal Jurisdictional Waters*, prepared by ELMT Consulting, Inc. Updated August 2025 (ELMT 2025), included as Appendix D.2; and
- *Desert Tortoise Focused Survey and Report Mojave Reclamation Project*, prepared by RCA Associates, Inc. November 4, 2020 (RCA 2020), included as Appendix D.3.

Concepts and Terminology

Special-Status Species

Special-status species are plants, animals, and fish species that are legally protected under the Federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), or other regulations, as well as species considered sufficiently rare by the scientific community to qualify for such listing. Special-status species include:

- Species listed or proposed for listing as threatened or endangered under the ESA (50 Code of Federal Regulations [CFR] 17.12 [listed plants], 50 CFR 17.11 [listed animals], and various notices in the *Federal Register* [FR] [proposed species]).
- Species that are candidates for possible future listing as threatened or endangered under the ESA (69 FR 24876, May 4, 2004).
- Species listed or proposed for listing by the State of California as threatened or endangered under the CESA (14 California Code of Regulations [CCR] 670.5).
- Species that meet the definitions of rare or endangered under the California Environmental Quality Act (CEQA; State CEQA *Guidelines* Section 15380).
- Plants listed as rare under the California Native Plant Protection Act (NPPA; California Fish and Game Code [CFGF] Section 1900 et seq.).
- Plants considered by the California Native Plant Society (CNPS) to be “rare, threatened, or endangered in California” (California Rare Plant Rank [CRPR] 1B and 2); plants ranked by CNPS as plants about which more information is needed to determine their status, and plants of limited distribution (CRPR 3 and 4), which may be included as special-status species on the basis of local significance or recent biological information.
- Animals considered Species of Special Concern (SSC) to the California Department of Fish and Wildlife (CDFW).
- Animals fully protected in California (CFGF Sections 3511 [birds], 4700 [mammals], and 5050 [amphibians and reptiles]).

4.4.2 Environmental Setting

This section discusses the existing biological resources conditions within, and adjacent to, the project site. Methods for evaluating site conditions (e.g., literature review, field surveys) and a description of the habitat types and species composition are provided.

Regional Setting

The proposed project is located in an unincorporated area of the southeastern part of Kern County, approximately 6 miles southeast of the City of Tehachapi and 7.25 miles west of the unincorporated community of Mojave. The project area is in the southeastern portion of unincorporated Kern County, situated in the Mojave Desert on the southeastern edge of the Tehachapi Mountains (**Figure 3-1, Site Vicinity**).

The project site is located on the southeastern edge of the Tehachapi Mountains. The elevation of the project area ranges from approximately 3,420 to 6,085 feet above mean sea level (amsl). Oak Creek Road runs east-west along the project site’s northern boundary. Tehachapi Willow Springs Road runs north-south along a portion of the northern portion of the project site’s western boundary and bisects the southwestern portion of the project site.

An approximately 40-acre parcel of land under federal ownership administered by the U.S. Bureau of Land Management (BLM) is located centrally within the exterior boundaries of the

project site, however it is not part of the project site. Nothing about the BLM access rights to their aforementioned parcel (the northeast quarter of the northwest quarter of Township 11 North, Range 14 West (T11N, R14W), San Bernardino Base and Meridian (SBB&M)) will be changed because of the proposed project.

Local Setting

The project site varies in topography, containing steep ridgelines, rocky hillsides, desert scrubland, rolling hills, and desert washes. A mountainous ridgeline runs through the majority of the project site starting in the northeast corner near the existing mine facilities, continuing to the southwest corner. Rolling hills and valleys occur on either side of the ridgeline (RCA 2025).

Much of the project site is composed of alluvial deposits and contains coarse-textured, well-drained soils developing from alluvium derived primarily from granite and other related rock sources. Soil series which occur within the project site include Cajon loamy sand, Cajon gravelly loamy sand, Cinco gravelly loamy sand, Garlock loamy sand, and Randsburg sandy loam. None of the soil series present in the project site have been identified by the National Resources Conservation Service (NRCS) as hydric (RCA 2025).

The northeastern portion of the project site includes existing mining operations and facilities and internal access roads. The southern boundary of the project site is bordered primarily by open desert habitat that is partially disturbed by off-highway vehicle (OHV) use, scattered dirt roads, and wind turbines. The northern border of the project site is bound by open habitat consisting of rolling grassland hillsides. All of the open areas have been historically grazed by cattle and/or sheep (RCA 2025).

Vegetation

Comprehensive biological surveys were conducted by biologists from RCA Associates, Inc., in September and October 2020 to evaluate the various vegetation communities present on the site (RCA 2025). Based on the field investigations, RCA determined that there are four main plant communities within the boundaries of the project site as well as 1,235 acres defined by RCA as disturbed areas and including active mine areas, roads, and cement and ready-mix concrete plant sites, and areas burned during 2006 and 2011 wildfires which are showing signs of revegetation with several years expected before the burned areas fully recover (RCA 2025).

Cover types mapped by RCA within the project site are shown on **Figure 4.4-1, Project Site Vegetation Communities**, and include:

- BLM Land and Juniper Woodland: NAP (BLM parcel, not part of project site)
- Burned/Disturbed: ~345.5 acres (southwestern project site, west of Tehachapi Willow Springs Road)
- California Juniper Woodland: ~1,611 acres
- Cleared Land for Mining: ~1,161.5 acres
- Joshua Tree Juniper Woodland: ~287 acres

- Mojave Desert Scrub: ~950 acres
- Oak Woodland: ~12 acres

Plant communities described by RCA are listed and summarized below:

- Mojave Juniper Woodland and Scrub
- Mojave Mixed Woody Scrub
- Joshua Tree Woodland
- Riparian/Riverine

Mojave Juniper Woodland and Scrub

The juniper woodland areas are relatively open habitat and are dominated by California juniper (*Juniperus californica*). This community covers approximately 1,218-acres within the area evaluated by RCA during the 2020 field investigations, and covers the majority of the foothills and slopes (RCA 2025). The understory is primarily a mixed woody scrub community with some of the more common understory species in this community including brome grass (*Bromus* sp.), ephedra (*Ephedra* sp.), California buckwheat (*Eriogonum fasciculatum*), matchweed (*Gutierrezia* sp.), bluegrass (*Poa* sp.), and needlegrass (*Stipa speciosa*). Juniper woodland communities are present throughout the mine site and cover approximately 1,218-acres, as noted above. Juniper woodland communities are not protected under CDFW guidelines or the *Kern County General Plan* (RCA 2025).

Mojave Mixed Woody Scrub

Large areas of the project site support mixed woody scrub vegetation which intergrade into the juniper woodland and Joshua tree woodland habitats, with the mixed woody scrub community occurring primarily at lower elevations in the flatter areas of the site. Dominant species included ephedra (*Ephedra viridis* and *E. nevadensis*), rabbitbrush (*Ericameria teretifolia* and *E. nauseosa*), and antelope bush (*Purshia tridentata*). Other species common throughout the mixed woody scrub areas included brome grasses (*Bromus* sp.), cheesebush (*Ambrosia salsola*), Cooper's goldenbush (*Ericameria cooperi*), matchweed, and beavertail cactus (*Opuntia basilaris*). The Mojave mixed woody scrub community covers approximately 920-acres with most of the scrub areas located in the southern portion of the project site. Mojave mixed woody scrub communities are not protected under CDFW guidelines or the *Kern County General Plan* (RCA 2025).

Joshua Tree Woodland

Joshua trees (*Yucca brevifolia*) are found within the project site and those areas where the species is most common (i.e., Joshua tree woodland) are relatively open terrain. The understory within the Joshua tree woodlands is very similar to that found in the mixed woody scrub areas and juniper woodland habitat. Some of the more common species in the Joshua tree woodland areas included brome grasses, ephedra, antelope bush, rabbitbrush, buckwheat, and creosote bush (*Larrea tridentata*). The Joshua tree woodland plant community is located almost entirely in the northern half of the mine site and cover approximately 287 acres of the site. CDFW considers Joshua tree woodland as a sensitive natural community but Joshua tree woodland is not protected under the *Kern County General Plan* (RCA 2025).

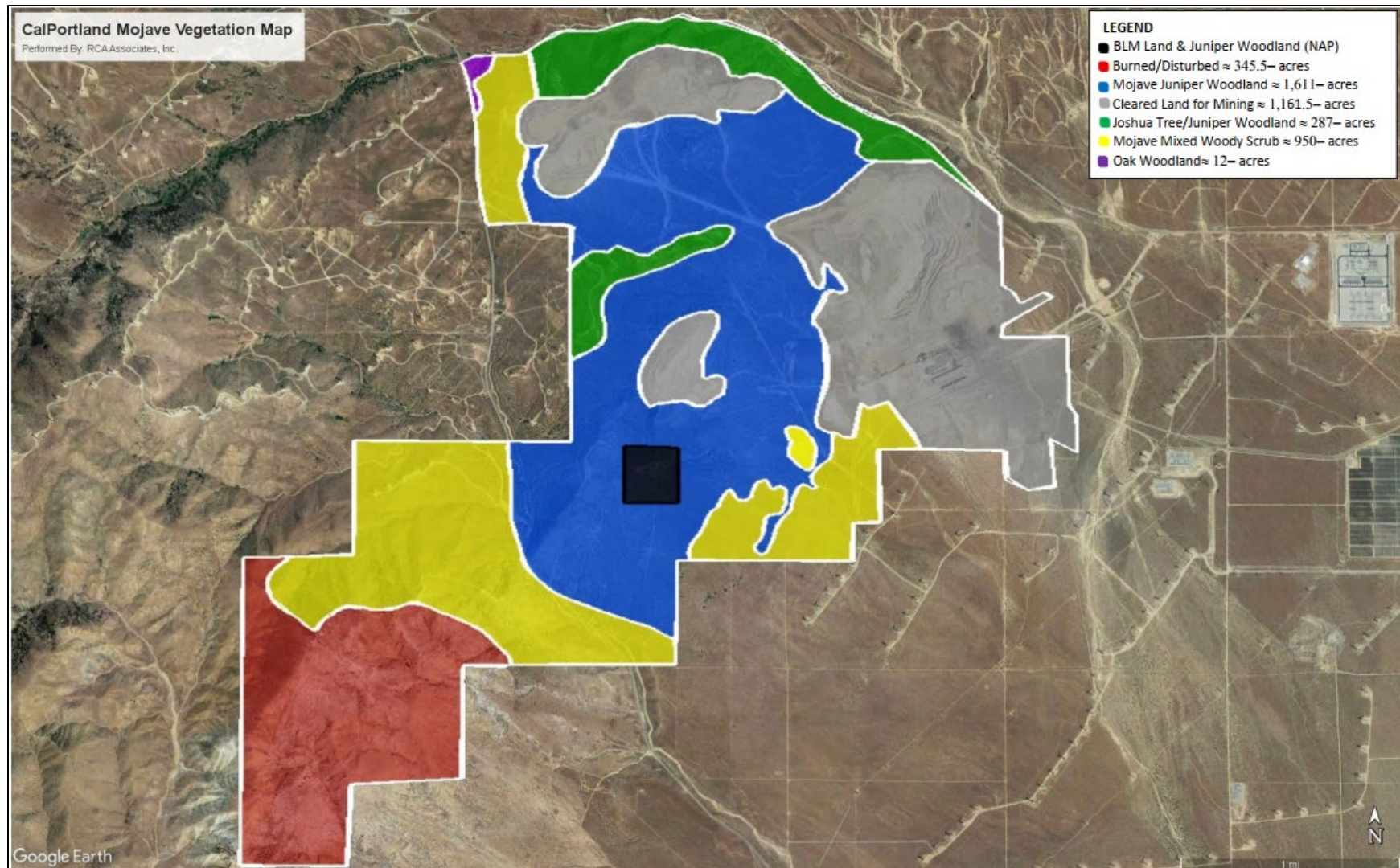


Figure 4.4-1
Project Site Vegetation Communities

The California Fish and Game Commission (Commission) made western Joshua tree a candidate for listing as a threatened species under the California Endangered Species Act (CESA) in September 2020. In July 2023, the California State Legislature passed and the governor signed into law the Western Joshua Tree Conservation Act (WJTCA), codifying as Chapter 11.5 of Division 2 of the California Fish and Game Code (commencing with Fish & G. Code, Section 1927). Among other provisions, WJTCA provides protections for western Joshua tree by prohibiting the import, export, take, possession, purchase, or sale of any western Joshua tree in California (Fish & G. Code, Section 1927.2, subd. (a)). Pursuant to Fish and Game Code Section 86, “take” means “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”) and allows CDFW to authorize take of western Joshua tree if certain conditions are met (Fish & G. Code, Section 1927.3, subds. (a)-(b)). On August 13, 2025, the California Fish and Game Commission adopted the Western Joshua Tree Conservation Plan which provides a comprehensive set of management actions necessary to conserve the western Joshua tree in California (CDFW 2025a).

Riparian

Fifteen (15) unnamed ephemeral drainage features (Drainages 1-15) were observed within the boundaries of the project site during field delineation performed by ELMT (2025) as shown on **Figure 4.4-2, *Onsite Drainage Features and Jurisdictional Waters***, and as described further in the *Hydrology* subsection below. The drainage channels bisect the project site with much of the vegetation within the channels similar to the surrounding habitats (e.g., juniper woodlands, mixed woody scrub, and Joshua tree woodlands) but with a few riparian plant species such as narrowleaf willow (*Salix exigua*), arroyo willow (*S. lasiolepis*), and golden willow (*S. lucida*) (RCA 2025), and one drainage (Drainage 7) supports patches of mulefat/willow scrub habitat (ELMT 2025).

Roads/Disturbed/Fire

According to Figure 3 of RCA 2025, approximately 1,161.5 acres within the northeastern portion of the project site are Cleared Land for Mining and approximately 345.5 acres within the southwestern portion of the project site are Burned/Disturbed resulting from fires in 2006 and 2011 (RCA 2025). Within the burned areas revegetation has begun and the area will eventually recover and provide habitat for wildlife in the region (RCA 2025).

Soils

Based on the NRCS USDA Web Soil Survey reviewed by ELMT (2025), the project site is underlain by the following soil units: Jawbone gravelly loamy sand (15 to 75 percent slopes), Cajon loamy sand (0 to 5 percent slopes), Cajon gravelly loamy sand (0 to 9 percent slopes), Cinco gravelly loam sand (50 to 75 percent slopes), Garlock loamy sand (2 to 9 percent slopes), Hi Vista sandy loam (2 to 9 percent slopes), Pajuela-Whitewolf association (steep), Quarries, Randsburg sandy loam (2 to 15 percent slopes), Torriorthents-Rock outcrop complex (very steep), and Wasioja sandy loam (5 to 9 percent slopes, cool) (ELMT 2025).

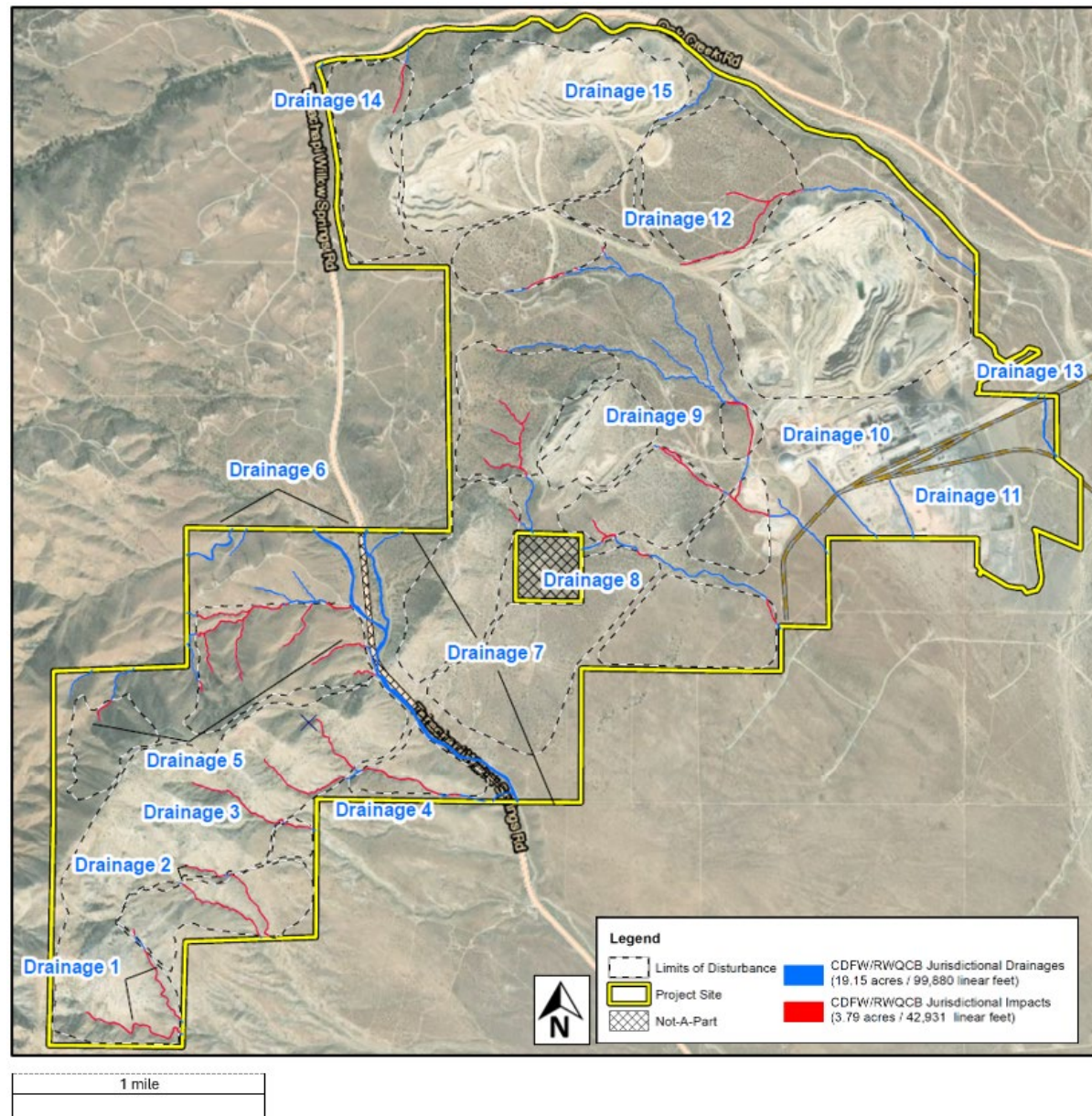


Figure 4.4-2
Onsite Drainage Features and Jurisdictional Waters

Hydrology

Fifteen (15) unnamed ephemeral drainage features (Drainages 1-15) were observed within the boundaries of the project site during field delineation performed by ELMT (2025) as shown on **Figure 4.4-2, *Onsite Drainage Features and Jurisdictional Waters***. ELMT assessed the site for depressions, inundation, presence of hydrophytic vegetation, staining, cracked soil, ponding, and indicators of active surface flow and corresponding physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris. Suspected jurisdictional areas were checked for the presence of definable channels, soils, and hydrology (ELMT 2025). ELMT (2025) concludes that the 15 drainages compose a total of 19.15 acres and 99,880 linear feet (approximately 18.9 miles) within the project site.

All of the onsite drainage features generally flow in a northwest to southeast direction across the project site. No surface water was present within the drainages during ELMT site visits; however, evidence of an ordinary high water mark (OHWM) was observed via scour, changes in substrate, shelving, and lack of vegetation. Across all of the drainage features, the OHWM ranged from approximately 1-20 feet in width throughout the length of the drainages. The unnamed drainages generally originate at the top of their local watershed, originating on the steep slopes of the hills within the boundary of the site. These features only convey surface flow in direct response to precipitation, and the majority of the drainages do not support riparian vegetation. However, Drainage 7 support patches of mulefat/willow scrub habitat.

All of the onsite drainage features, after flowing offsite, eventually converge into Oak Creek, and infiltrate/dissipate approximately 4 miles southeast of the project site near the intersection of Tehachapi Willows Springs Road and Backus Road before flowing into agricultural areas and developments. Drainages 8-15 on the eastern portion of the project site flow into Oak Creek, while Drainages 1-6 on the western portion of the project site eventually flow into Drainage 7 before converging with Oak Creek (ELMT 2025).

The onsite drainage features do not have a surface hydrologic connection to downstream waters of the United States; however, the onsite drainages may fall under the regulatory authority of the California Regional Water Quality Control Board, Lahontan Region, (RWQCB) as waters of the State, and, potentially, CDFW as jurisdictional streambed, notwithstanding the lack of observed fish and wildlife resources (ELMT 2025).

Drainages 1-6 are located on the western portion of the project site, west of Tehachapi Willow Springs Road. These drainage features generally originate at the top of the steep hillsides before flowing into Drainage 7, which is the main drainage feature on the western portion of the project site that generally parallels Tehachapi Willow Springs Road (ELMT 2025).

Drainages 8-15 are located on the eastern portion of the project site, east of Tehachapi Willow Springs Road. These drainage features also originate at the top of the steep hillsides before flowing into Oak Creek, southeast of the project site (ELMT 2025).

Oak Creek is located along the northern boundary of the project site and generally extends west to east along the northern boundary before flowing northwest to southeast, east of the project footprint (ELMT 2025).

The drainage features, at the origin, primarily consisted of minimal vegetation. However, as the drainages extended across the site, they became more vegetated, consisting primarily of upland scrub indicative of the surrounding area. Common plant species observed in association with the onsite drainages include creosote (*Larrea tridentata*), juniper (*Juniperus californica*), rubber rabbitbrush (*Ericamerica nauseosa*), California buckwheat (*Eriogonum fasciculatum*), brittlebush (*Encelia farinosa*), chia (*Salvia columbariae*), Mormon tea (*Ephedra nevadensis*), silver cholla (*Cylindropuntia echinocarpa*), cheesebush (*Ambrosia salsola*), matchweed (*Gutierrezia californica*), cottonthorn (*Tetradymia stenolepis*), cryptantha (*Cryptantha* sp.), Great Basin sage (*Artemisia tridentata*), red brome (*Bromus madritensis* ssp. *rubens*), short-podded mustard (*Hirschfeldia incana*), downy chess (*Bromus tectorum*), and Mediterranean grass (*Schismus* sp.). Of the common plant species observed, it should be noted that short-podded mustard, red brome, downy chess, and Mediterranean grass are the only non-native/invasive plant species. None of these plants are threatened, endangered, or have special status in California. Mulefat/willow scrub plant communities were observed in patches along Drainage 7. These patches of mulefat/willow scrub were dominated by mulefat (*Baccharis salicifolia*), and willow (*Salix* sp.) (ELMT 2025).

Although evidence of hydrology (i.e., scour, changes in substrate, shelving) is present within the onsite drainages, these areas were determined by ELMT (2025) to be primarily dominated by upland plant species. Further, water does not persist long enough on the project site to create hydric soil (anaerobic) conditions, and none of the onsite drainages supported a dominance of hydrophytic vegetation. As a result, none of the onsite drainage features meet the U.S. Army Corps of Engineers (USACE) or RWQCB's wetland definition to qualify as jurisdictional wetlands (ELMT 2025).

The onsite drainage features, including those within the road right-of-way for Tehachapi Willow-Springs Road, exhibit characteristics consistent with both the RWQCB waters of the State methodology and CDFW streambed methodology. Therefore, the drainages may be considered jurisdictional waters of the State and potential CDFW-regulated streambed. Approximately 19.15 acre (99,880 linear feet) of potential non-wetland waters of the State and CDFW jurisdictional areas are present within the project site (ELMT 2025).

Critical Habitat

The project site is not located within federally designated Critical Habitat. The closest Critical Habitat designation is located over 7 miles west of the project site for California condor (*Gymnogyps californianus*) in the Tehachapi Mountains (CDFW 2025b).

Connectivity and Migration Corridors

The importance of continuous habitat corridors and the effects of habitat fragmentation on wildlife populations have been studied extensively and are well understood. Land development and linear structures (e.g., roadways) convert large habitat blocks into noncontiguous patches separated by barriers; individual animals and entire populations can become isolated in remnant habitat "fragments." Depending on their size and other characteristics, these fragments may not support viable populations of some animals.

Wildlife movement corridors are linear habitats that function to connect two or more areas of significant wildlife habitat. These corridors may function on a local level as links between small habitat patches (e.g., streams in urban settings) or may provide critical connections between regionally significant habitats (e.g., deer movement corridors). Wildlife corridors typically include vegetation and topography that facilitate the movements of wild animals from one area of suitable habitat to another in order to fulfill foraging, breeding, and territorial needs. These corridors often provide cover and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian zones and similar linear expanses of contiguous habitat.

The project site, as well as adjacent habitats, cover several thousand acres of various habitats which are relatively contiguous. Some of these areas support relatively dense habitat (i.e., juniper woodlands) which provide suitable cover for wildlife to move from one area to another while utilizing the cover provided. In addition, there are numerous drainage channels which also provide important wildlife corridors (RCA 2025).

Literature Review

In 2020, RCA conducted a literature review and records search for special status biological resources occurring on or within the vicinity of the project site. Data sources utilized included the California Natural Diversity Data Base (CNDDB), California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) data sources and special status species maps were reviewed. Specifically, the USGS Monolith quadrangle in which most of the area is located was evaluated along with the surrounding eight USGS quadrangles (Cache Peak, Mojave, Tehachapi North, Tehachapi Northeast, Tehachapi South, Soledad Mountain, Tylerhorse Canyon, and Willow Springs). All available reports, survey results, and literature detailing the biological resources previously observed on or within the vicinity of the project site were reviewed by RCA to understand existing site conditions and note the extent of any disturbances that have occurred on the project site that would otherwise limit the distribution of special-status biological resources. Standard field guides and texts were reviewed for specific habitat requirements of special-status and nonspecial-status biological resources. The literature review provided a baseline from which to inventory the biological resources potentially occurring within the project site. Additional recorded occurrences of those species found on or near the project site were derived from database queries. The CNDDB database was used, in conjunction with GIS software, to locate the occurrence records and determine the distance from the project site (RCA 2025).

Survey Methodology

RCA conducted a preliminary reconnaissance survey on September 21, 2020, and performed additional field investigations throughout the project site on September 24, 25 and 28, and October 5 & 6, 2020. Plant communities identified on aerial photographs during the literature review were verified by walking meandering transects through the plant communities and along boundaries between plant communities. Aerial photography was reviewed prior to the site investigation to locate potential natural wildlife corridors and linkages that may support the movement of wildlife through the area. These areas identified on aerial photography were then walked during the field investigation (RCA 2025).

The transects varied in width from about 50 to 100 meters, during which time data was collected on the plant and animal species present on the site. The wildlife and raptor survey occurred in September and October 2020 which would allow for the detection of most wildlife, migratory birds species, and raptor species. Special attention was paid to any special-status habitats and/or undeveloped, natural areas, which have a higher potential to support special-status plant and wildlife species (RCA 2025).

During the biological surveys, all transects were walked at a pace that allowed careful observations along the transect routes and in the immediate vicinity. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, and condition of onsite plant communities were noted (RCA 2025).

Raptor surveys were conducted in conjunction with the general biological surveys and included the evaluation of potential raptor nesting and foraging habitats within the Survey Area. All avian species observed were recorded as well as any nesting and/or mating behavior in order to document potential breeding or nesting activities within the Survey Area. Rock outcrops and trees were also scanned with binoculars for visual evidence of any nesting activity such as white wash and stick nests. Any potential nesting sites were examined closely for pellets, feathers, prey remains, or other evidence of nesting activity. If encountered, any nest or breeding sign was documented, and GPS coordinates were recorded (RCA 2025). The USFWS has issued an interim guidance on the management of golden eagles; therefore, any potential eagle foraging and nesting habitat (i.e., cliffs) was documented as part of the wildlife and raptor field surveys (RCA 2025).

Focused surveys for the several special-status species documented in the region were conducted as part of the RCA study (RCA 2025). Areas providing suitable habitat for burrowing owl were closely surveyed for signs of presence during the habitat assessment. Methods to detect the presence of burrowing owl included direct observation, aural detection, and signs of presence including pellets, white wash, feathers, or prey remains (RCA 2025).

Given the location of the project site within potential habitat for the desert tortoise, it was deemed necessary to conduct a focused-protocol survey for the species to determine if the species is present on the site, and RCA conducted a desert tortoise protocol survey in October 2020. The results of the survey are provided in the *Desert Tortoise Focused Survey and Report Mojave Reclamation Project* (RCA 2020) included as **Appendix D.3** of this EIR.

Common Wildlife and Plant Species

During the biological surveys conducted on September 24, 25 and 28, and October 5 and 6 2020, birds were the most common wildlife observed with nineteen species identified and numerous other wildlife species have been documented in the area. Several mammals or their sign were seen by RCA biologists including antelope ground squirrel (*Ammospermophilus leucurus*), mule deer (*Odocoileus hemionus*), blacktail jackrabbit (*Lepus californicus*), cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus californicus*), coyote (*Canis latrans*), woodrat (*Neotoma* sp.), and mountain lion (*Felix concolor*). Only a few reptiles were observed during the RCA 2020 field investigations including side botched lizard

(*Uta stansburiana*) and red coachwhip (*Masticophis flagellum piceus*). Some of the other reptiles common to the region include leopard lizard (*Gambelia wislizenis*), Mohave rattlesnake (*Crotalus scutulus*), and western whiptail (*Aspidoscelis tigris*).

A listing of wildlife species observed on the site during RCA September and October 2020 field investigations are listed in **Table 4.4-1, Wildlife Species Observed During RCA 2020 Field Investigations**.

Table 4.4-1 Wildlife Species Observed During RCA 2020 Field Investigations

Common Name	Scientific Name
Birds	
Blue-Gray Gnatcatcher	<i>Poliophtila caerulea</i>
Mountain Chickadee	<i>Poecile gambeli</i>
Common Raven	<i>Corvus corax</i>
Bewick's wren	<i>Thryomanes bewickii</i>
California scrub jay	<i>Aphelocoma californica</i>
House finch	<i>Haemorhous mexicanus</i>
Mourning dove	<i>Zenaida macroura</i>
California quail	<i>Callipepla californica</i>
Bell's sparrow	<i>Artemisiospiza belli</i>
Cooper's hawk	<i>Accipiter cooperii</i>
Loggerhead shrike	<i>Lanius ludovicianus</i>
Turkey Vulture	<i>Cathartes aura</i>
Red-tail hawk	<i>Buteo jamaicensis</i>
Lark sparrow	<i>Chondestes grammacus</i>
Black throated sparrow	<i>Amphispiza bilineata</i>
Rock wren	<i>Salpinctes obsoletus</i>
Lesser goldfinch	<i>Spinus psaltria</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
Greater roadrunner	<i>Geococcyx californianus</i>
California towhee	<i>Melzone crissalis</i>
Rough-legged hawk	<i>Buteo lagopus</i>
Scotts oriole	<i>Icerus parisorum</i>
Spotted towhee	<i>Pipilo maculatus</i>

Table 4.4-1 Wildlife Species Observed During RCA 2020 Field Investigations

Common Name	Scientific Name
Western kingbird	<i>Tyrannus verticalis</i>
Western tanager	<i>Piranga ludoviciana</i>
Wilson's warbler	<i>Wilsonia pusilla</i>
Mammals	
Jackrabbit	<i>Lepus californicus</i>
Antelope ground squirrel	<i>Ammospermophilus leucurus</i>
Muledeer	<i>Odocoileus hemionus</i>
Desert cottontail	<i>Sylvilagus audubonii</i>
California ground squirrel	<i>Otospermophilus beecheyi</i>
Coyote	<i>Canis latrans</i>
Mountain lion	<i>Puma concolor</i>
Pocket gopher	<i>Thomomys</i> sp.
Woodrat	<i>Neotoma</i> sp.
Reptiles	
Red coachwhip	<i>Masticophis flagellum piceus</i>
Side-blotched lizard	<i>Uta stansburiana</i>
Long-nosed leopard lizard	<i>Gambelia wislizenii</i>
Northern Mohave rattlesnake	<i>Crotalus scutulatus scutulatus</i>
Western fenced lizard	<i>Sceloporus occidentalis</i>
Western whiptail	<i>Aspidoscelis tigris</i>
Yellow-back spiny lizard	<i>Sceloporus uniformus</i>

Source: RCA 2025.

1. The above is not a comprehensive list of every animal species which may occur in the area, but is a list of those common species which were identified on the site or which have been observed in the region by biologists from RCA Associates, Inc.

Plant species observed on the site during RCA 2020 field investigations, as well as plants documented in the region, are listed in **Table 4.4-2, Plant Species Observed During 2020 Field Investigation as well as Plants Documented in the Region.**

Table 4.4-2 Plant Species Observed During 2020 Field Investigation as well as Plants Documented in the Region

Common Name	Scientific Name
California juniper	<i>Juniperus californica</i>
Buckwheat	<i>Eriogonum</i> sp.
Fiddleneck	<i>Amsinckia tessellata</i>
Beavertail cactus	<i>Opuntia basilaris</i>
Ephedra	<i>Ephedra</i> sp.
Joshua tree	<i>Yucca brevifolia</i>
Kelch grass	<i>Schismus barbatus</i>
Matchweed	<i>Gutierrezia sarothrae</i>
Silver cholla	<i>Cylindropuntia echinocarpa</i>
Rubber rabbitbrush	<i>Ericameria nauseosa</i>
Red brome	<i>Bromus matritensis</i> ssp. <i>Rubens</i>
Cheatgrass	<i>Bromus tectorum</i>
Rattlesnake weed	<i>Chamaesyce albomarginata</i>
Cobweb thistle	<i>Cirsium occidentale</i>
Jimson weed	<i>Datura wrightii</i>
Squirreltail grass	<i>Elymus elymoides</i>
Acton's encelia	<i>Encelia actoni</i>
Giant woolly star	<i>Eriastrum densifolium</i>
Annual buckwheat	<i>Eriogonum</i> sp.
Red-stemmed filaree	<i>Erodium cicutarium</i>
Spiny hopsage	<i>Grayia spinosa</i>
Winter fat	<i>Krascheninnikovia lanata</i>
Mojave wild parsley	<i>Lomatium mohavense</i>
Wishbone bush	<i>Mirabilis laevis</i>
Mojave beardtongue	<i>Penstemon incertus</i>
One sided bluegrass	<i>Poa secunda</i>
Antelope bush	<i>Purshia tridentata</i>
Chia	<i>Salvia columbariae</i>
Blue sage	<i>Salvia doril</i>

Table 4.4-2 Plant Species Observed During 2020 Field Investigation as well as Plants Documented in the Region

Common Name	Scientific Name
Indian ricegrass	<i>Stipa hymenoides (Achnatherum h.)</i>
Desert needlegrass	<i>Stipa speciosa (Achnatherum speciosum)</i>
Mojave cottonthorn	<i>Tetradymia stenolepis</i>

Source: RCA 2025.

1. The above is not a comprehensive list of every plant species which may occur in the area, but is a list of those common species which were identified on the site or which have been observed in the region by biologists from RCA Associates, Inc.

Special-Status Species

RCA's 2020 search of the California Natural Diversity Database (CNDDDB) determined that 20 special-status species have been documented within the general area surrounding the project site. **Table 4.4-3, Federal and State Listed Species and State Species of Special Concern**, lists these species and RCA's determination of presence or absence.

Desert Tortoise

Desert tortoise is a federal and state-listed threatened species. The project site is located within suitable tortoise habitat according to CNDDDB (2020) with documented populations of the species occurring within approximately 5-10 miles of the project site. Based on the fact that the project site is located in an area with suitable tortoise habitat, it was deemed necessary to conduct a focused/protocol survey for the species. RCA biologists conducted a protocol survey for the tortoise in October 2020. The 2020 survey was concentrated in an approximately 849-acre area of the project site where suitable habitat for the species is present. No desert tortoises or tortoise sign were documented in October 2020 and the results of the survey and a detailed discussion are provided in the Desert Tortoise Focused Survey and Report Mojave Reclamation Project (RCA 2020) included as **Appendix D.3** of this EIR. Accordingly, RCA determined that desert tortoise is absent from the project site (RCA 2025).

Table 4.4-3 Potentially Occurring Special-Status Species

Scientific Name Common Name	Status (see table notes)		Present/Absent
Wildlife Species			
<i>Anniella pulchra</i> Northern California legless lizard	Fed: CA: CDFW:	None None SSC	None observed. Absent from the project site.
<i>Aquila chrysaetos</i> golden eagle	Fed: CA: CDFW:	None None SSC	None observed. Absent from the project site.
<i>Athene cunicularia</i> burrowing owl	Fed: CA: CDFW:	None CTHR SSC	None observed. Absent from the project site.

Table 4.4-3 Potentially Occurring Special-Status Species

Scientific Name Common Name	Status (see table notes)		Present/Absent
<i>Buteo regalis</i> ferruginous hawk	Fed: CA: CDFW:	None None WL	None observed. Absent from the project site.
<i>Buteo swainsonii</i> Swainson's hawk	Fed: CA:	None THR	None observed. Absent from the project site.
<i>Falco columbarius</i> merlin	Fed: CA: CDFW:	None SSC SSC	None observed. Absent from the project site.
<i>Gopherus agassizii</i> desert tortoise	Fed: CA:	THR THR	None observed. Absent from the project site.
<i>Lanius ludovicianus</i> loggerhead shrike	Fed: CA: CDFW:	None None SSC	Loggerhead shrike observed onsite. Present.
<i>Onychomys torridus tularensis</i> Tulare grasshopper mouse	Fed: CA: CDFW:	None None SSC	None observed. Absent from the project site.
<i>Perognathus alticola inexpectatus</i> Tehachapi pocket mouse	Fed: CA: CDFW:	None None SSC	None observed. Absent from the project site.
<i>Perognathus inornatus</i> San Joaquin pocket mouse	Fed: CA: CDFW:	None None SSC	None observed. Absent from the project site.
<i>Phrynosoma blainvillii</i> Coast horned lizard	Fed: CA: CDFW:	None None SSC	None observed. Absent from the project site.
<i>Taxidea taxus</i> American badger	Fed: CA: CDFW:	None None SSC	None observed. Absent from the project site.
<i>Toxostoma lecontei</i> Le Conte's thrasher	Fed: CA: CDFW:	None None SSC	None observed. Absent from the project site.
Plant Species			
<i>Astragalus hornii</i> var. <i>hornii</i> Horn's milk-vetch	Fed: CA: CNPS:	None None 1B.1	None observed. Absent from the project site.
<i>Calochortus striatus</i> alkali mariposa-lily	Fed: CA: CNPS:	None None 1B.2	None observed. Absent from the project site.
<i>Layia heterotricha</i> Pale-yellow layia	Fed: CA: CNPS:	None None 1B.1	None observed. Absent from the project site.

Table 4.4-3 Potentially Occurring Special-Status Species

Scientific Name Common Name	Status (see table notes)		Present/Absent
<i>Monardella linoides ssp. oblonga</i> Tehachapi monardella	Fed: CA: CNPS:	None None 1B.3	None observed. Absent from the project site.
<i>Saltugilia latimeri</i> Latimer's woodland-gilla	Fed: CA: CNPS:	None None 1B.2	None observed. Absent from the project site.
<i>Yucca brevifolia</i> Western Joshua tree	Fed: CA:	None CTHR	Western Joshua tree observed onsite. Present.

Source: RCA 2025

Notes:U.S. Fish and Wildlife Service (USFWS) -
FederalEND- Federal Endangered
THR- Federal Threatened**California Department of Fish and Wildlife (CDFW) - California**END - California Endangered
THR - California Threatened
FP - California Fully Protected
SSC - California Species of Concern
W L - Watch List
CTHR - Candidate for THR**California Native Plant Society (CNPS)****California Rare Plant Rank**1A Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B Plants Rare, Threatened, or Endangered in California and Elsewhere
2B Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
4 Plants of Limited Distribution – A Watch List**Wildlife Species of Special Concern**

Based on an analysis of the data from the CNDDDB (2020), the following species, which are classified as special status species, have been documented in the surrounding region and/or have potential for occurring on the project site. A “Species of Special Concern” is an administrative designation and carries no formal legal status, unlike a threatened or endangered species (RCA 2025).

These species include:

- Burrowing owl (*Athene cunicularia*)
- Coast horned lizard (*Phrynosoma blainvillii*)
- Golden eagle (*Aquila chrysaetos*)
- Le Conte’s thrasher (*Toxostoma lecontei*)
- Tehachapi pocket mouse (*Perognathus alticolus inexpectatus*)
- American badger (*Taxidea taxus*)
- Western red bat (*Lasiurus blossevillii*)
- Loggerhead shrike (*Lanius ludovicianus*)

(RCA 2025)

None of the special status species listed above were documented during RCA 2020 field surveys with the exception of loggerhead shrike (*Lanius ludovicianus*). Loggerhead shrikes were observed on three separate occasions during the 2020 RCA surveys, primarily in the central portion of the property. However, no nesting activities (i.e., nest building) or mating behavior (i.e., mating/display behavior) were observed among the shrikes (RCA 2025).

Raptors

Three species of raptors were observed in the survey area during the September – October RCA 2020 surveys. Species observed included red-tailed hawk, Cooper’s hawk, and turkey vulture. All three raptor species were observed flying over the survey area during hunting activities. No raptor nests were observed in the survey area and none of the three species are listed as special status wildlife species. Based on the CNDDDB data search, there are no known recorded occurrences of any special status wildlife species within the survey area or within five miles of the survey area (CNDDDB 2020, as cited in RCA 2025). Several inactive raven nests were observed in the survey area, primarily in the juniper woodland community. No signs of activity were observed and no whitewash, or egg shells were identified. In addition, no raptor nests or any signs of mating and breeding activities for any of the raptors which occur in the general region (e.g., red-tailed hawk, Cooper’s hawk, turkey vultures) were observed in the survey area (RCA 2025).

A brief summary of the raptors observed by RCA on the site are provided below:

Red-tailed Hawk (*Buteo jamaicensis*) (Covered under the Migratory Bird Treaty Act [MBTA]): This hawk species is a common, permanent breeding and winter resident of Southern California; although, there are some red-tailed hawks which are migrants. The species typically occurs in open habitats such as grassland, shrub communities, croplands, and pastures. where it preys on small mammals as well as birds and reptiles. It roosts and nests in large trees including deciduous and coniferous forests.

Cooper’s Hawk (*Accipiter cooperii*) (State Species of Special Concern): Cooper’s hawks are resident birds through the state where it is found primarily in woodland, riparian and forest habitats. The species roosts and nest in deciduous trees but may also be found in coniferous forest. It forages over wooded habitats with patches of open areas and feeds on small birds and mammals.

Turkey Vulture (*Cathartes aura*): The turkey vulture is common throughout California and can frequently be seen soaring and hunting over open habitats (fields, grasslands, shrublands, etc.) where cliffs and large trees are available for nesting and roosting. The species feeds primarily on carrion, but does feed occasionally on birds, and small mammals (RCA 2025).

4.4.3 Regulatory Setting

Federal

Federal Endangered Species Act

The ESA of 1973 (16 United States Code [USC] Sections 1531–1543) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. The ESA defines species as “threatened” or “endangered” and provides regulatory protection for listed species. The ESA provides a program for conservation and recovery of threatened and endangered species, and conservation of designated critical habitat that USFWS has determined is required for the survival and recovery of these listed species. Certain sections of the ESA have specific potential applicability to the project and are discussed below:

Section 7 requires Federal agencies, in consultation with and with the assistance of the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions they authorize, fund, or carry out, are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. USFWS and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) share responsibilities for administering the ESA. Regulations governing interagency cooperation under Section 7 are found at 50 CFR Part 402. The opinion issued at the conclusion of consultation will include a statement authorizing a take that may occur incidental to an otherwise legal activity.

Section 9 lists those actions that are prohibited under the ESA. Section 9 of the ESA prohibits take (i.e., to harass, harm, pursue, hunt, wound, kill, etc.) of listed species of fish, wildlife, and plants without special exemption. “Harm” is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or shelter. “Harass” is further defined as actions that create the likelihood of injury to listed species to an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, and shelter.

Section 10 provides a means whereby a non-Federal action with a potential to result in the “take” of a listed species could be allowed under an incidental take permit. Application procedures are found at 50 CFR Parts 13 and 17 for species under the jurisdiction of USFWS and 50 CFR Parts 217, 220, and 222 for species under the jurisdiction of NOAA Fisheries.

Migratory Bird Treaty Act

The MBTA, first enacted in 1918, domestically implements a series of treaties between the United States and Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds; the act provides that it shall be unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird” (16 USC 703). The current list of species protected by

the MBTA includes several hundred species and essentially includes all native birds. Permits for take of nongame migratory birds can be issued only for specific activities, such as scientific collecting, rehabilitation, propagation, education, taxidermy, and protection of human health and safety and personal property. On December 22, 2017, the Office of the Solicitor of the Department of the Interior issued a Memorandum (Opinion M-37050) regarding the MBTA prohibition on incidental take, which substantially modifies the Department's policy regarding the enforcement of the MBTA against the incidental taking or killing of migratory birds. The Solicitor's Opinion is that the MBTA does not prohibit incidental take, such that "the statute's prohibitions on pursuing, hunting, taking, capturing, killing, or attempting to do the same apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs."

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 (16 USC 668, enacted by 54 Stat. 250) protects bald and golden eagles by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act. Take of bald and golden eagles is defined as follows: "disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle; (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior" (72 FR 31132; 50 CFR 22.3).

On November 10, 2009, USFWS implemented new rules (74 FR 46835) governing the "take" of golden and bald eagles. The new rules were released under the existing BGEPA which has been the primary regulation protection for unlisted eagle populations since 1940. All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by the USFWS under this act.

Federal Clean Water Act

The Federal Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Certain sections of the CWA have specific potential applicability to the project and are discussed below:

Section 401 of the CWA requires that the project proponent for any project that affects waters of the United States must request a 401 Water Quality Certification, which must be issued before the start of project construction. In association with obtaining a Section 404 permit, a Water Quality Certification must be obtained from the Regional Water Quality Control Board (RWQCB). To obtain approval of the application for Water Quality Certification, projects must follow USACE Section 404(b)(1) Guidelines, which specify avoidance of wetland impacts and minimization and mitigation of impacts to any affected wetlands.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredge or fill material) into waters of the United States.

Section 404 establishes a permit program, administered by the USACE, regulating the discharge of dredged or fill material into waters of the United States, including wetlands.

Implementing regulations by USACE are found at 33 CFR Parts 320–330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines and were developed by the U.S. Environmental Protection Agency (USEPA) in conjunction with the USACE (40 CFR Parts 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Aquatic resources, including riparian areas, wetlands, and certain aquatic vegetation communities, are considered sensitive biological resources and can fall under the jurisdiction of several regulatory agencies.

USACE exerts jurisdiction over waters of the United States, including all waters that are subject to the ebb and flow of tide; wetlands and other waters such as lakes, rivers, streams (including intermittent or ephemeral streams), mudflats, sandflats, sloughs, prairie potholes, vernal pools, wet meadows, playa lakes, or natural ponds, and tributaries of the above features. The extent of waters of the United States is generally defined as that portion that falls within the limits of the OHWM. Typically, the OHWM corresponds to the 2-year flood event.

Wetlands, including swamps, bogs, seasonal wetlands, seeps, marshes, and similar areas, are defined by USACE as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3[b]; 40 CFR 230.3[t]). Indicators of three wetland parameters (i.e., hydric soils, hydrophytic vegetation, and wetlands hydrology) as determined by field investigation must be present for a site to be classified as a wetland by the USACE.

As discussed above, USACE regulatory jurisdiction under Section 404 is founded on a connection between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the USACE regulations. On January 9, 2001, the Supreme Court issued a decision in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* concerning CWA jurisdiction over isolated waters. This decision substantially affected the extent of USACE’s regulatory authority over “non-navigable, isolated, intrastate waters,” and, particularly, the use of indirect indicators of interstate commerce (e.g., use by migratory birds that cross state lines) as a basis for jurisdiction.

State

California Environmental Quality Act

CEQA was adopted in 1970 and applies to public agencies in California with discretionary authority over project approvals and permits. CEQA requires that impacts of proposed projects be assessed before the project is approved. Projects with significant impacts on the environment cannot be approved without adequate mitigation or compensation, unless a finding of overriding consideration is made. Discretionary approval from public agencies may require avoidance measures or compensatory mitigation. CEQA also provides that less-than-

significant impacts of an individual project can be treated as significant if they contribute to significant cumulative impacts on the environment.

California Endangered Species Act

The CESA is similar to the ESA but pertains to State-listed endangered and threatened species. It requires State agencies to consult with the CDFW when preparing CEQA documents to ensure that the State lead agency actions do not jeopardize the existence of listed species. It directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that there are “overriding considerations;” however, the agencies are prohibited from approving projects that would result in the extinction of a listed species. The CESA prohibits the taking of State-listed endangered or threatened plant and wildlife species. The CDFW exercises authority over mitigation projects involving State-listed species, including those resulting from CEQA mitigation requirements. The CDFW may authorize “take” if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. The CDFW requires preparation of mitigation plans (CDFW 2081 permit) in accordance with published guidelines.

California Fish and Game Code

The CFGC establishes the foundation of fish, wildlife, and native plant protections and management in the State. Certain sections of the CFGC have specific potential applicability to the project and are discussed below:

Sections 1600 through 1616 require the project proponent to notify the CDFW prior to any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Pursuant to the CFGC, a “stream” is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that supports or has supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial streams valuable to fish and wildlife are subject to CDFW jurisdiction. The CDFW also has jurisdiction over dry washes that carry water ephemerally during storm events. Consultation with the CDFW shall be conducted to determine if the two dry washes on the project site are jurisdictional to the CDFW and if they might require a Streambed Alteration Agreement (SAA).

Preliminary notification and project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, the CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a SAA that becomes part of the plans, specifications, and bid documents for the project.

Section 2080 states, “No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the [California Fish and Game] Commission determines to be an endangered species or

threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act.”

Section 2081 authorizes individuals or public agencies to import, export, take, or possess, any State-listed endangered, threatened, or candidate species with approval from CDFW. These otherwise prohibited acts may be authorized through permits or a Memorandum of Understanding (MOU) if: (1) the take is incidental to an otherwise lawful activity; (2) impacts of the authorized take are minimized and fully mitigated; (3) the permit is consistent with any regulations adopted pursuant to any recovery plan for the species; and (4) the project proponent ensures adequate funding to implement the measures required by the CDFW. The CDFW makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

Section 3503 and 3503.5 prohibits the project proponent from conducting activities that would result in the taking, possessing, or destroying of any birds of prey, taking or possessing of any migratory non-game bird as designated in the MBTA, or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant to CFGC Section 3800.

Native Plant Protection Act (California Fish and Game Code Sections 1900–1913)

The NPPA requires all State agencies to utilize their authority to carry out programs to conserve endangered and rare native plants. Provisions of the NPPA prohibit the taking of listed plants from the wild and require notification of the CDFW at least 10 days in advance of any change in land use. This allows the CDFW to salvage listed plant species that would otherwise be destroyed. The project proponent is required to conduct botanical inventories and consult with the CDFW during project planning to comply with the provisions of the NPPA and sections of CEQA that apply to rare or endangered plants.

California Desert Native Plants Act

The California Desert Native Plants Act (Division 23 of the California Food and Agriculture Code) was established to protect California desert native plants from unlawful harvesting on both public and privately owned lands. The Act also provides information necessary to legally harvest native plants so as to ultimately transplant those plants with the greatest possible chance of survival. The act further encourages public participation in implementing the safeguards established by this division and in evaluating the effectiveness and desirability of the safeguards.

Porter Cologne Act

The California Porter-Cologne Water Quality Control Act gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post *SWANCC* (*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 [2001]) and *Rapanos* (*Rapanos v. United States*, 547 U.S. 715 [2006]) regulatory environment, with respect to the state’s authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge in the event that there is no CWA Section

404/401 nexus. Although “waste” is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

Western Joshua Tree Conservation Act

The California Fish and Game Commission made western Joshua tree a candidate for listing as a threatened species under the California Endangered Species Act (CESA) in September 2020. In July 2023, the California State Legislature passed and the governor signed into law the Western Joshua Tree Conservation Act (WJTCA), codifying as Chapter 11.5 of Division 2 of the California Fish and Game Code (commencing with Fish & G. Code, Section 1927). Among other provisions, WJTCA provides protections for western Joshua tree by prohibiting the import, export, take, possession, purchase, or sale of any western Joshua tree in California (Fish & G. Code, Section 1927.2, subd. (a)). Pursuant to Fish and Game Code Section 86, “take” means “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”) and allows CDFW to authorize take of western Joshua tree if certain conditions are met (Fish & G. Code, Section 1927.3, subds. (a)-(b)). On August 13, 2025, the California Fish and Game Commission adopted the Western Joshua Tree Conservation Plan which provides a comprehensive set of management actions necessary to conserve the western Joshua tree in California (CDFW 2025a).

Local

Kern County General Plan

The project site is located within the *Kern County General Plan*. The *Kern County General Plan* identifies the Federal, State, and local statutes, ordinances, or policies that govern the conservation of biological resources that must be considered by Kern County during the decision-making process for any project that could impact biological resources.

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

The Land Use, Open Space, and Conservation Element of the *Kern County General Plan* states that the element provides for a variety of land uses for future economic growth while also assuring the conservation of County’s agricultural, natural, and resource attributes. Section 1.10, General Provisions, provides goals, policies, and implementation measures that apply to all types of discretionary projects.

1.10 General Provisions

1.10.5 Threatened and Endangered Species

Policies

- **Policy 27.** Threatened or endangered plant and wildlife species should be protected in accordance with state and federal laws.
- **Policy 28.** County should work closely with state and federal agencies to assure that discretionary projects avoid or minimize impacts to fish, wildlife, and botanical resources.
- **Policy 29.** The County will seek cooperative efforts with local, state, and federal agencies to protect listed threatened and endangered plant and wildlife species through

the use of conservation plans and other methods promoting management and conservation of habitat lands.

- **Policy 30.** The County will promote public awareness of endangered species laws to help educate property owners and the development community of local, state, and federal programs concerning endangered species conservation issues.
- **Policy 31.** Under the provisions of the California Environmental Quality Act (CEQA), the County, as lead agency, will solicit comments from the California Department of Fish and Game and the U.S. Fish and Wildlife Service when an environmental document (Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report) is prepared.
- **Policy 32.** Riparian areas will be managed in accordance with United States Army Corps of Engineers, and the California Department of Fish and Game rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.

Implementation Measures

- **Implementation Measure Q.** Discretionary projects shall consider effects to biological resources as required by the California Environmental Quality Act.
- **Implementation Measure R.** Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to the California Environmental Quality Act.
- **Implementation Measure S.** Pursue the development and implementation of conservation programs with state and federal wildlife agencies for property owners desiring streamlined endangered species mitigation programs.

Cameron Canyon Specific Plan

The *Cameron Canyon Specific Plan* was adopted in June of 1986. The Resource Element of the *Cameron Canyon Specific Plan* stipulates in part that there is no history of mineral production within the Specific Plan. Mineral production was subsequently undertaken on land within the project site boundaries which is also within the *Cameron Canyon Specific Plan* boundaries.

Section VII. Resource Element

Goals

- **Goal 4.** To ensure that any earthwork or grading is adequately designed for drainage and erosion control and site rehabilitation.

Policies

- **Policy 2.** Rivers and streams in the County are important visual and recreational resources and wildlife habitats. Areas of riparian vegetation along rivers and streams will, therefore, be preserved.

4.4.4 Impacts and Mitigation Measures

This section describes the methodology used in conducting the impact analysis for biological resources, the thresholds of significance used in assessing impacts to biological resources, and the assessment of impacts to biological resources, including relevant mitigation measures.

Methodology

This section describes the potential biological resources impacts associated with development of the project. This analysis is based on the following:

- *Baseline Biological Survey Report Mojave Life of Mine Reclamation Plan Amendment*, prepared by RCA Associates, Inc. Revised August 2025 (RCA 2025), included as **Appendix D.1**;
- *CalPortland's Mojave Life of Mine Reclamation Plan Amendment Delineation of State and Federal Jurisdictional Waters*, prepared by ELMT Consulting, Inc. Updated August 2025 (ELMT 2025), included as **Appendix D.2**; and
- *Desert Tortoise Focused Survey and Report Mojave Reclamation Project*, prepared by RCA Associates, Inc. November 4, 2020 (RCA 2020), included as **Appendix D.3**.

Baseline conditions were first established for the affected environment relevant to biological resources, as presented above in **Section 4.4.2, Environmental Setting**. Literature review and field survey methodologies are described in **Section 4.4.2, Environmental Setting**, and in each of the corresponding survey reports included in **Appendix D**.

The proposed project is a reclamation plan amendment that would provide for reclamation of mined lands following completion of the project proponent's ongoing vesting mining operations. However, this biological resources analysis considers the impacts of ongoing vested mining and reclamation within the project site for purposes of disclosure and regulatory agency review and ancillary permitting.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect on biological resources. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to biological resources if it would:

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

- b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- c. Have a substantial adverse effect on Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Project Impacts

Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

As discussed in **Section 4.4.2, *Environmental Setting***, cover types mapped by RCA within the project site include Burned/Disturbed (640 acres), California Juniper Woodland (1,611 acres), Cleared Land for Mining (825 acres), Joshua Tree Juniper Woodland (287 acres), Mojave Desert Scrub (950 acres), and Oak Woodland (12 acres), and the project site includes 15 drainages, one of which includes riparian habitat (RCA 2025). Vested mining operations and project reclamation activities would modify existing site conditions and would have the potential to adversely affect vegetation communities and special-status plant and animal species.

Special-Status Wildlife Species

Based on habitat requirements, availability and quality of habitats needed by each special-status wildlife species, and habitat assessment results, RCA determined that the project site has potential to provide suitable habitat for the following six special-status wildlife species:

- desert tortoise (*Gopherus agassizii*),
- burrowing owl (*Athene cunicularia*),
- Tehachapi pocket mouse (*Perognathus alticola inexpectatus*),
- golden eagle (*Aquila chrysaetos*),
- loggerhead shrike (*Lanius ludovicianus*), and
- Ferruginous hawk (*Buteo regalis*).

(RCA 2025)

Of these, loggerhead shrike (Species of Special Concern) was the only special-status species observed on the project site (RCA 2025). In addition, red-tailed hawk (*Buteo jamaicensis*) (protected under the Migratory Bird Treaty Act) and Cooper's hawk (*Accipiter cooperii*) (Species of Special Concern) were also observed by RCA during the biological survey. The raptors were observed flying over the survey area and were likely hunting; however, no raptor nests were identified within the survey area (RCA 2025).

Site disturbance will occur incrementally over the planned 200-year life of vested mining operations followed by project reclamation. Vested mining activities will reduce the amount of available habitat which supports raptor prey species (i.e., rabbits, ground squirrels, etc.). However, a reduction of available foraging habitat for raptors and forcing raptors into adjacent habitats for foraging/hunting activities is not expected to generate a significant cumulative impact on raptors in the region. Similar habitats are available throughout the surrounding region and should be capable of supporting any raptors which currently utilize the Mojave Mine for foraging (RCA 2025).

Nesting birds are protected pursuant to the MBTA and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). RCA (2025) recommends that, in order to protect migratory bird species, a nesting bird clearance survey should be conducted prior to any new ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season (February 1st through August 31st) and that the clearance survey be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities in a new undisturbed area to ensure that no nesting birds will be disturbed. If an active avian nest is discovered during the survey, new ground disturbance and vegetation removal should stay outside of a no-disturbance buffer determined by the wildlife biologist and dependent on the level of noise and/or surrounding anthropogenic disturbances, line-of-sight between the nest and project activities, type and duration of project activity, ambient noise, species habituation, and topographical barriers. RCA (2025) recommends that these factors be evaluated on a case-by-case basis when developing buffer distances. Limits of any new ground disturbance or vegetation removal activities to avoid an active nest should be established in the field, as needed, with flagging, fencing, or other appropriate barriers; and project construction personnel should be instructed on the sensitivity of nest areas. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, activities within the buffer area would be allowed (RCA 2025).

Special-Status Plant Species

Six special-status plant species have been recorded in the CNDDDB and CNPS in the Monolith and Willow Springs 7.5-minute quadrangles. Based on habitat requirements, availability and quality of habitats needed by each special-status plant species, and habitat assessment results, RCA determined that the project site has potential to provide suitable habitat for the following five special-status plant species:

- Pale-yellow layia (*Layia heterotricha*),

- Latimer's woodland-gilla (*Saltugilia latimeri*),
- Horn's milk vetch (*Asragalus hornii* car. *hornii*),
- Alkalai mariposa-lily (*Calochortus striatus*), and
- western Joshua tree (*Yucca brevifolia*).

(RCA 2025)

Western Joshua tree (*Yucca brevifolia*) was the only special-status plant species observed onsite during the 2020 field visits by RCA. Other desert native plants from the protected list that were observed include the beavertail cactus and the silver cholla (RCA 2025 citing ELMT 2023).

Vested mining activities will, over time, disturb much of the existing vegetation within the area with the majority of vegetation to be disturbed consisting of Mojave juniper woodland and Mojave mixed woody scrub (1,218-acres and 920-acres respectively). A relatively small area (145-acres) of Joshua tree woodland habitat and a small area of riparian habitat will also be impacted by vested mining activities. The remainder of the project site which will be affected by future vested mining activities consists of roads, disturbed areas, and areas of the mine which were burned during the 2006 and 2011 wildfires (RCA 2025).

The Western Joshua Tree Conservation Act (WJTCA) authorizes CDFW to oversee the various permitting processes dealing with mitigation and/or removal and relocation of western Joshua trees. Therefore, any attempt to remove a Joshua tree from its current position will require a California Endangered Species Act Incidental Take Permit (CESA, ITP) or a Western Joshua Tree Conservation Act Incidental Take Permit (WJTCA, ITP). CDFW is the lead agency in the decision making of the projects forward progress pertaining to western Joshua trees. Given the presence of Joshua tree and the potential to impact this species, Joshua tree shall be avoided unless an incidental take permit is prepared and processed through CDFW under the California Endangered Species Act, so long as Joshua tree remains protected under CESA (RCA 2025).

CDFW Recommendations

CDFW provided an October 4, 2024, comment letter to Kern County in response to the Notice of Preparation issued for the proposed project. CDFW noted that the project may be subject to CDFW's regulatory authority pursuant to CESA. CDFW advised that in the event that species listed under CESA are detected during implementation of the project, consultation with CDFW would be warranted to discuss how to implement the project and avoid "take," or if avoidance is not feasible, to acquire a State Incidental Take Permit (ITP), pursuant to Fish and Game Code Section 2081 subdivision (b), prior to any ground disturbing activities. CDFW also recommended that the project retain a qualified biologist during implementation of project activities to determine if potential impacts to CESA listed species may require the need to obtain a 2081 ITP (CDFW 2024).

CDFW specifically recommended the Draft EIR evaluate and address the following animal and plant species: the State threatened Mohave ground squirrel (*Xerospermophilus mohavensis*); the State fully protected and federally endangered California condor (*Gymnogyps californianus*); the State fully protected Golden eagle (*Aquila chrysaetos*); the State threatened

Swainson's hawk (*Buteo swainsoni*); the State endangered Willow flycatcher (*Empidonax traillii*); the State and federally threatened desert tortoise (*Gopherus agassizii*); the State threatened southern rubber boa (*Charina umbratica*) and Tehachapi slender salamander (*Batrachoseps stebbinsi*); the State candidate for listing endangered Crotch's bumble bee (*Bombus crotchii*); the State and federally endangered Bakersfield cactus (*Opuntia basilaris* var. *treleasei*); the State candidate threatened Western Joshua tree (*Yucca brevifolia*); the State protected furbearing mammal desert kit fox (*Vulpes macrotis arsipus*); the State species of special concern American badger (*Taxidea taxus*), Tehachapi pocket mouse (*Perognathus alticola inexpectatus*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), western red bat (*Lasiurus frantzii*), and burrowing owl (*Athene cunicularia*); the State species of special concern and federally proposed endangered/threatened California spotted owl (*Strix occidentalis occidentalis*); the State species of special concern Le Conte's thrasher (*Toxostoma lecontei*), loggerhead shrike (*Lanius ludovicianus*), long-eared owl (*Asio otus*), Mountain plover (*Charadrius montanus*), Northern harrier (*Circus hudsonius*), Vaux's swift (*Chaetura vauxi*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), yellow warbler (*Setophaga petechia*), coast horned lizard (*Phrynosoma blainvillii*), and northern California legless lizard (*Anniella pulchra*); the State watch list black-tailed gnatcatcher (*Poliophtila melanura*), Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), Long-billed curlew (*Numenius americanus*), merlin (*Falco columbarius*), prairie falcon (*Falco mexicanus*), sharp-shinned hawk (*Accipiter striatus*), White-faced ibis (*Plegadis chihi*), and yellow-blotched salamander (*Ensatina eschscholtzii croceater*), the California Rare Plant Rank (CRPR) 1B.1 Coulters goldfields (*Lasthenia glabrata* ssp. *Coulteri*), Horns milk-vetch (*Astragalus hornii* var. *hornii*), and Pale yellow layia (*Layia heterotricha*); the CRPR 1B.2 alkali mariposa-lily (*Calochort striatus*), Baja navarretia (*Navarretia peninsularis*), Calico monkeyflower (*Diplacus pictus*), Palmers mariposa-lily (*Calochortus palmeri* var. *palmeri*), Robbins nemacladus (*Nemacladus secundiflorus* var. *robbinsii*), Latimer's woodland-gilia (*Saltugilia latimeri*), and grey-leaved violet (*Viola pinetorum* ssp. *grisea*); and the CRPR 1B.3 Mt. Pinos onion (*Allium howellii* var. *clokeyi*), southern Sierra monardella (*Monardella linoides* ssp. *anemonoides*), Tehachapi monardella (*Monardella linoides* ssp. *Oblonga*).

Special-Status Species Impact Summary

Impacts to vegetation communities and special-status plant and animal species associated with vested mining operations and project reclamation are considered potentially significant. Mitigation Measures MM 4.4-1 through MM 4.4-9 would reduce potential impacts to less than significant.

Mitigation Measures

MM 4.4-1 Within 30 days of the effective date of this approval, the project proponent/operator shall develop an employee awareness program on the Migratory Bird Treaty Act and the Federal and State endangered species laws and regulations. The program shall provide employees with sufficient information to identify sensitive or protected species that could exist onsite, methods to avoid these species, and protection measures to reduce the potential for incidental take of these species. The employee awareness program shall be approved and implemented by a qualified biologist until such time as reclamation has been completed and the site deemed fully reclaimed by the

Kern County Planning and Natural Resources Department. A copy of the approved training materials shall be provided to the Kern County Planning and Natural Resources Department.

MM 4.4-2

Prior to initial ground disturbance during ongoing mining operations and reclamation activities within undisturbed portions of the project site, a qualified biologist knowledgeable in the identification of all special-status wildlife and rare plant species shall conduct a pre-construction clearance survey of areas proposed for disturbance within the project site to record existing conditions of the site, determine if conditions have changed since the most recent reconnaissance or botanical surveys were conducted, and to determine where sensitive species avoidance buffers will be established for special-status species considered to have the potential to occur within the project site, including but not limited to the following:

Special-Status Wildlife Species

- Northern California legless lizard (*Anniella pulchra*)
- Golden eagle (*Aquila chrysaetos*)
- burrowing owl (*Athene cunicularia*)
- ferruginous hawk (*Buteo regalis*)
- Swainson's hawk (*Buteo swainsonii*)
- merlin (*Falco columbarius*)
- desert tortoise (*Gopherus agassizii*)
- loggerhead shrike (*Lanius ludovicianus*)
- Tulare grasshopper mouse (*Onychomys torridus tularensis*)
- Tehachapi pocket mouse (*Perognathus alticola inexpectatus*)
- San Joaquin pocket mouse (*Perognathus inornatus*)
- Coast horned lizard (*Phrynosoma blainvillii*)
- American badger (*Taxidea taxus*)
- Le Conte's thrasher (*Toxostoma lecontei*)
- Mohave ground squirrel (*Xerospermophilus mohavensis*)
- California condor (*Gymnogyps californianus*)
- Willow flycatcher (*Empidonax traillii*)
- southern rubber boa (*Charina umbratica*)
- Tehachapi slender salamander (*Batrachoseps stebbinsi*)
- Crotch's bumble bee (*Bombus crotchii*)
- Bakersfield cactus (*Opuntia basilaris* var. *treleasei*)

- desert kit fox (*Vulpes macrotis arsipus*)
- western red bat (*Lasiurus frantzii*)
- California spotted owl (*Strix occidentalis occidentalis*)
- long-eared owl (*Asio otus*)
- Mountain plover (*Charadrius montanus*)
- Northern harrier (*Circus hudsonius*)
- Vaux's swift (*Chaetura vauxi*)
- yellow-headed blackbird (*Xanthocephalus xanthocephalus*)
- yellow warbler (*Setophaga petechia*)
- black-tailed gnatcatcher (*Poliophtila melanura*)
- Cooper's hawk (*Accipiter cooperii*)
- Long-billed curlew (*Numenius americanus*)
- prairie falcon (*Falco mexicanus*)
- sharp-shinned hawk (*Accipiter striatus*)
- White-faced ibis (*Plegadis chihi*)
- yellow-blotched salamander (*Ensatina eschscholtzii croceater*)

Special-Status Plant Species

- Horn's milk-vetch (*Astragalus hornii* var. *hornii*)
- alkali mariposa-lily (*Calochortus striatus*)
- Pale-yellow layia (*Layia heterotricha*)
- Tehachapi monardella (*Monardella linoides* ssp. *oblonga*)
- Latimer's woodland-gilia (*Saltugilia latimeri*)
- Western Joshua tree (*Yucca brevifolia*)
- Coulter's goldfields (*Lasthenia glabrata* ssp. *Coulteri*)
- Baja navarretia (*Navarretia peninsularis*)
- Calico monkeyflower (*Diplacus pictus*)
- Palmer's mariposa-lily (*Calochortus palmeri* var. *palmeri*)
- Robbins' nemacladus (*Nemacladus secundiflorus* var. *robbinsii*)
- grey-leaved violet (*Viola pinetorum* ssp. *grisea*)
- Mt. Pinos onion (*Allium howellii* var. *clokeyi*)
- southern Sierra monardella (*Monardella linoides* ssp. *anemonoides*)

If initial ground-disturbing activities do not commence within 30 days of the initial survey date, surveys shall be repeated to refresh results.

If any sensitive species are observed, buffers shall be established by the qualified biologist as necessary to prevent incidental take of any observed sensitive species.

MM 4.4-3 During vested mining and reclamation activities, the project proponent/operator shall implement the following general avoidance and protective measures:

- a. All reclamation activities shall be confined within the project area, which may include temporary access roads, haul roads, and staging areas specifically designated and marked for these purposes. At no time shall equipment or personnel be allowed to adversely affect areas outside the project site.
- b. All stockpiles shall be in disturbed areas that lack native vegetation to the maximum extent practicable.
- c. All trash and food items including microtrash (e.g., wrappers, bottle tops, food scraps) should be properly stored in a closed container.
- d. Workers shall be prohibited from bringing pets and personal firearms to the project site and from feeding wildlife.
- e. Vehicle traffic shall use established roadways. Off-road vehicle travel should be minimized to the maximum extent practicable.
- f. No construction vehicle or equipment parked on the project site shall be moved prior to inspecting the ground beneath the vehicle or equipment for the presence of listed wildlife species. If present, the animal shall be left to move on its own.
- g. Open excavations or trenches more than two (2) feet deep shall be covered at the end of each workday to prevent wildlife entrapment. If an excavation or trench is too large to cover, one or more escape ramps shall be installed, no less than 12 inches wide and secured at the top. Covered and non-covered excavations and trenches shall be inspected for wildlife prior to the commencement of work.
- h. All construction pipes, culverts, or similar structures with a diameter of four (4) inches or greater that are stored at the site for more than 24 hours and without endcaps shall be thoroughly inspected prior to being moved or capped. If a listed wildlife species is discovered inside a pipe, that section of pipe shall not be moved or capped until a qualified biologist has been consulted and the animal has either moved from the structure on its own accord or until the animal has been captured and relocated in conformance with appropriate wildlife agency guidelines.

- i. If perimeter fencing is used, then the fencing shall include a 4- to 8-inch (0.1- to 0.2-meter) opening between the fence mesh and the ground or the fence shall be raised 4 inches above the ground or as otherwise established by a qualified wildlife biologist to enable wildlife to pass through the project site.
- j. All vertical tubes and chain-link fencing piles shall be temporarily or permanently capped to avoid the entrapment and death of special-status wildlife and birds.
- k. Any dead or injured special-status wildlife found on the project site shall be left in place and reported to the U.S. Fish and Wildlife Service/California Department of Fish and Wildlife within 48 hours of the discovery for rescue or salvage. Discovery of Federally or State-listed species that are injured or dead shall also be managed consistent with regulatory requirements, including being reported immediately via telephone and within 24 hours in writing, and a copy shall be furnished to the Kern County Planning and Natural Resources Department.
- l. All washing of trucks, or other mobile equipment shall occur in areas where runoff is effectively managed to avoid discharge of contaminants. Wash water may not be discharged from the site and shall be located at least 100 feet (30.48 meters) from any water body or sensitive biological resources. If ground disturbance is intended to be temporary and does not occur on cultivated land, topsoil segregation shall be performed for restoration efforts. Segregated topsoil shall be stored separate from the subsoil and segregated topsoil shall be restored following resource recovery activities. This will decrease unwanted invasive plant species (e.g., tumble weed, invasive grasses) from invading the area.
- m. Contact a qualified biologist if any dens suitable for desert tortoise, burrowing owl, and/or American badger (4 inches or greater in diameter) are observed during project activities.
- n. If any threatened, endangered, or otherwise sensitive species are uncovered during project activities, work shall be halted, their locations shall be mapped and the project proponent shall confer with CDFW or USFWS as required by applicable law to determine the best course of action. Any threatened, endangered, or otherwise sensitive wildlife species shall be allowed to leave the site of their own accord.

MM 4.4-4 Active pits with slopes steeper than 2:1 (horizontal:vertical) shall have a minimum of one escape ramp or shall otherwise be fenced or obstructed to prevent wildlife entrapment.

MM 4.4-5 No more than 10 days prior to initial ground-disturbing activities, a pre-disturbance survey for active bird nests shall be conducted, if work occurs during the typical nesting bird season (February 1 through August 31). If any

active nests are observed, appropriate buffer areas (at least 50 feet) shall be established around each nest for avoidance as appropriate.

- MM 4.4-6** No more than 30 days prior to initial ground-disturbing activities, if planned to occur during the nesting seasons for raptors and migratory birds (typically February 1 through August 31), the project proponent shall retain a qualified biologist to conduct a focused survey for active nests of raptors and migratory birds within and in the vicinity of the project site (no less than 500 feet outside project boundaries, where possible).
- MM 4.4-7** If active nests are located during pre-disturbance surveys, U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife shall be notified regarding the status of the nests. If an active golden eagle nest is located within 500 feet of ground-disturbing activities, or if any other active raptor nest is located within 100 feet of ground-disturbing activities, or if an active migratory bird nest is located within 50 feet of ground-disturbing activities protection measures shall be applied and enforced. Protection measures would include delaying project activities until the end of the breeding season, or if project activities must take place during the breeding season, establishing an appropriate avoidance area (buffer zone) around the nest as determined by a qualified biologist in consultation with the appropriate resource agency. A qualified wildlife biologist shall monitor the nest to determine when the young have fledged and submit monthly reports to the Kern County Planning and Natural Resources Department throughout the nesting season. The biological monitor shall have the authority to cease mining activities or other activities if sign of distress to the raptor or migratory bird occurs.
- MM 4.4-8** During vested mining and reclamation activities, initial ground disturbance within undisturbed portions of the project site shall be restricted as necessary to avoid disturbance of a nest until it is abandoned or a qualified biologist deems disturbance potential to be minimal (in consultation with U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife). Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment) or alteration of the schedule for project activities. No action is necessary if initial ground disturbance within undisturbed portions of the project site occurs during the raptor and migratory bird nonbreeding season (September 1 through January 31).
- MM 4.4-9** If nighttime lighting for reclamation activities is required and is within 50 feet of the outside edge of areas containing habitat for special-status wildlife, as determined by the qualified biologist, lighting shall be directed away from those areas that contain habitat for special-status wildlife.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.4-1** through **MM 4.4-9**, impacts would be less than significant.

Impact 4.4-2: The project would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Riparian habitat and waters of the State under the jurisdiction of the Lahontan Regional Water Quality Control Board (RWQCB) and the California Department of Fish and Wildlife (CDFW) are identified as potentially present within the project site. Additionally, Joshua tree woodland is present within the project site. Vested mining operations and reclamation activities may adversely affect these sensitive communities.

Jurisdictional Waters of the State and Streambeds

As discussed previously, fifteen (15) unnamed ephemeral drainage features (Drainages 1-15) were observed within the boundaries of the project site during field delineation performed by ELMT (2025) as shown on **Figure 4.4-2, Onsite Drainage Features and Jurisdictional Waters**. All of the onsite drainage features generally flow in a northwest to southeast direction across the project site. The unnamed drainages generally originate at the top of their local watershed, originating on the steep slopes of the hills within the boundary of the site. These features only convey surface flow in direct response to precipitation, and the majority of the drainages do not support riparian vegetation. However, Drainage 7 support patches of mulefat/willow scrub habitat (ELMT 2025).

The onsite drainage features, including those within the road right-of-way within Tehachapi Willow-Springs Road, exhibit characteristics consistent with both the RWQCB waters of the State methodology and CDFW streambed methodology. Therefore, the drainages may be considered jurisdictional waters of the State and potential CDFW-regulated streambed. Approximately 19.15 acre (99,880 linear feet) of potential non-wetland waters of the State and CDFW jurisdictional areas are present within the project site and ELMT (2025) concludes that, based on the proposed site plan, approximately 3.79 acre (42,931 linear feet) of RWQCB jurisdictional areas will be impacted (ELMT 2025). Any impacts to onsite jurisdictional waters of the State would likely require a Lahontan RWQCB Waste Discharge permit prior to activities within these areas and impacts to onsite CDFW jurisdictional areas would likely require a CDFW Section 1602 Lake or Streambed Alteration Agreement.

Western Joshua Tree

Western Joshua tree (*Yucca brevifolia*) was identified onsite during the 2020 field visits by RCA (2025). Vested mining activities will, over time, disturb existing vegetation within the area with the majority of vegetation to be disturbed consisting of Mojave juniper woodland and Mojave mixed woody scrub (1,218-acres and 920-acres respectively). A 145-acre area of Joshua tree woodland habitat will be impacted, and individual western Joshua trees will be removed (RCA 2025).

The Western Joshua Tree Conservation Act (WJTCA) authorizes CDFW to oversee the various permitting processes dealing with mitigation and/or removal and relocation of western Joshua trees. Therefore, any attempt to remove a Joshua tree from its current position will require a California Endangered Species Act Incidental Take Permit (CESA, ITP) or a Western Joshua

Tree Conservation Act Incidental Take Permit (WJTCA, ITP). CDFW is the lead agency in the decision making of the projects forward progress pertaining to western Joshua trees. Given the presence of Joshua tree and the potential to impact this species, Joshua tree shall be avoided unless an incidental take permit is prepared and processed through CDFW under the California Endangered Species Act, so long as Joshua tree remains protected under CESA (RCA 2025).

With implementation of Mitigation Measures **MM 4.4-10** and **MM 4.4-11**, impacts would be significant and unavoidable.

Mitigation Measures

- MM 4.4-10** Prior to removal of any western Joshua tree individuals, the project proponent/operator shall obtain a Western Joshua Tree Conservation Act Incidental Take Permit if required for those that cannot be avoided or preserved on the project site, and shall comply with all avoidance, minimization, and compensatory mitigation requirements set forth in any incidental take permit issued for the project. All trees removed may be salvaged to the extent feasible and as allowed by issued permits.
- MM 4.4-11** If Regional Water Quality Control Board (RWQCB) and/or CDFW jurisdictional resources cannot be avoided, the project proponent/operator shall be subject to provisions as identified below:
- a. Prior to ground disturbance activities that could impact RWQCB and/or CDFW jurisdictional resources, the project proponent/operator shall consult with the RWQCB and/or CDFW to obtain all necessary permits. Permits shall be obtained prior to disturbance of jurisdictional resources.
 - b. The project proponent/operator shall comply with all avoidance, minimization, and compensatory mitigation measures, as set forth in permits issued to the project by RWQCB and/or CDFW.
 - c. Copies of permits/approvals obtained from the RWQCB and/or CDFW shall be provided to the Kern County Planning and Natural Resources Department.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.4-10** and **MM 4.4-11**, impacts would be significant and unavoidable.

Impact 4.4-3: The project would have a substantial adverse effect on Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Based on U.S. Army Corps of Engineers (USACE) regulations, the onsite drainage features are ephemeral features that flow only in direct response to precipitation, are not considered

perennial or intermittent tributaries, do not contribute surface water flows to downstream waters, and do not possess a significant nexus (surface hydrologic connection) to downstream waters of the United States. As a result, the onsite drainage features are not expected to be considered Federally protected wetlands or fall under the regulatory authority of the USACE (ELMT 2025). Impacts to state jurisdictional waters are discussed under **Impact 4.4-2**.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.4-4: The project would 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.

Habitat linkages provide links between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparative undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet, inadequate for others. Wildlife corridors are significant features for dispersal, seasonal migration, breeding, and foraging, allowing for reproduction and allowing for greater genetic diversity within all species. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources (RCA 2025).

The project site, as well as adjacent habitats, cover several thousand acres of various habitats which are relatively contiguous. Some of these areas support relatively dense habitat (i.e., juniper woodlands) which provide suitable cover for wildlife to move from one area to another while utilizing the cover provided. In addition, there are numerous large drainage channels which also provide important wildlife corridors. Project implementation is not expected to have a significant impact on wildlife movement. Species are still going to be able to travel fluidly across the landscape and not become landlocked due to significant infrastructure (RCA 2025).

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.4-5: The project would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The project would not conflict with policies contained in the *Kern County General Plan* and/or the *Cameron Canyon Specific Plan* (see discussion in **Section 4.11, Land Use and Planning**, of this EIR). Therefore, this impact is considered less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.4-6: The project would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

As discussed at **Impact 4.4-2**, Western Joshua tree (*Yucca brevifolia*) was identified onsite during the 2020 field visits by RCA (2025). Vested mining activities will, over time, disturb much of the existing vegetation within the area with the majority of vegetation to be disturbed consisting of Mojave juniper woodland and Mojave mixed woody scrub (1,218-acres and 920-acres respectively). A 145-acre area of Joshua tree woodland habitat will be impacted (RCA 2025).

The Western Joshua Tree Conservation Act (WJTCA) authorizes CDFW to oversee the various permitting processes dealing with mitigation and/or removal and relocation of western Joshua trees. Therefore, any attempt to remove a Joshua tree from its current position will require a California Endangered Species Act Incidental Take Permit (CESA, ITP) or a Western Joshua Tree Conservation Act Incidental Take Permit (WJTCA, ITP). CDFW is the lead agency in the decision making of the projects forward progress pertaining to western Joshua trees. Given the presence of Joshua tree and the potential to impact this species, Joshua tree shall be avoided unless an incidental take permit is prepared and processed through CDFW under the California Endangered Species Act, so long as Joshua tree remains protected under CESA (RCA 2025).

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

The geographic scope for cumulative impacts to biological resources considers projects or other activities generally within a 6-mile radius of the project site. **Section 3.7, Cumulative Effects Overview**, of this EIR discusses cumulative projects near the project (**Table 3-15, Cumulative**

Projects List, in **Chapter 3, Project Description**, lists specific projects considered in the cumulative impact analysis). Analysis of cumulative impacts includes considering the entirety of impacts that the cumulative projects and other actions discussed in **Section 3.7, Cumulative Effects Overview**, would have on biological resources. This geographic scope of analysis is appropriate because, although impacts of the project are primarily localized to the impact areas, losses of vegetation types or fragmentation of wildlife corridors could combine with similar impacts of other projects beyond these limited impact areas.

Impact 4.4-7: The project would contribute to cumulative biological resource impacts.

The potential for cumulative biological resources impacts of the project exists as a result of biological resources impacts of other past, present (ongoing), and reasonably foreseeable future development and other activities. Historic and ongoing land uses such as renewable energy generation (wind and solar), as well as mining, have reduced the quantity and quality of wildlife habitats provided by undeveloped grassland and overall riparian habitats in the project area.

It is reasonable to anticipate that ongoing land uses and future development within the project vicinity will continue to result in vegetation removal, grading, and loss of habitat. Vested mining would result in a long-term loss of vegetation and habitat on the project site that could potentially provide future marginal foraging and nesting habitat for special-status species. Project reclamation following vested mining would improve site conditions as compared to conditions at the completion of vested mining through stabilization and revegetation as provided for by the project reclamation plan.

The mitigation measures identified above for potential project-specific impacts would serve to avoid or minimize the impacts of vested mining as well as the contribution of these impacts to cumulative impacts. Due to Federal and State regulatory requirements and Kern County policies geared toward biological resources protection, it is also reasonable to anticipate that similar mitigation will be required of other projects to minimize their impacts to biological resources. Additionally, Mitigation Measure **MM 4.4-2** would require that prior to initial ground disturbance, a qualified biologist shall conduct a pre-construction clearance survey of areas proposed for disturbance. Therefore, the proposed project, in combination with all identified cumulative projects, would result in a cumulatively significant impact on migratory birds that would be reduced to less than significant after implementation of mitigation.

Mitigation Measures

Implement Mitigation Measures **MM 4.4-1** through **MM 4.4-11** (see **Section 4.4, Biological Resources**).

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.4-1** through **MM 4.4-11**, cumulative impacts would be less than significant.

Section 4.5

Cultural Resources

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4.5.1 Introduction

This section of the Environmental Impact Report (EIR) provides contextual background information on cultural resources in the project area, including the area's prehistoric, ethnographic, and historical settings. This section also summarizes the results of cultural surveys conducted for the project site, analyzes the project's potential impacts on cultural resources, and identifies mitigation measures to address adverse impacts, where applicable. Additional information regarding tribal cultural resources and results of the Native American consultation conducted by Kern County is provided in **Section 4.16, *Tribal Cultural Resources***, of this EIR.

The proposed project is a reclamation plan amendment that would provide for reclamation of mined lands following completion of the project proponent's ongoing vested mining operations. However, this cultural resources analysis considers the impacts of ongoing vested mining and reclamation within the project site for purposes of disclosure and regulatory agency review.

Information regarding cultural resources is based in part on the following studies prepared for the project:

- *A Phase I Cultural Resource Inventory for the Mojave Mine Life Project, Kern County, California*, prepared by EM Strategies August 2021, (EM Strategies 2021) redacted version included in Appendix E.1 of this EIR; and
- *Phase II Cultural Resources Eligibility Evaluations, CalPortland Mojave Facility Project, Kern County, California*, prepared by BCR Consulting, LLC., dated July 17, 2025, (BCR 2025) redacted version included in Appendix E.2 of this EIR.

For the purposes of the California Environmental Quality Act (CEQA), "cultural resources" generally refer to prehistoric and historical archaeological sites and the built environment. Cultural resources can also include areas determined to be important to Native Americans, called tribal cultural resources. **Section 4.16, *Tribal Cultural Resources***, of this EIR specifically addresses tribal cultural resources and the County's tribal notifications and consultation. Paleontological resources are evaluated in **Section 4.7, *Geology and Soils***, of this EIR.

Concepts and Terminology

Below are definitions of key cultural resources terms used in this section.

- **Alluvium:** A fine-grained fertile soil consisting of mud, silt, and sand deposited by flowing water on flood plains, in riverbeds, and in estuaries.

- **Archaeological Site:** A site is defined as the place or places where the remnants of a past culture survive in a physical context that allows for the interpretation of these remains. Archaeological remains usually take the form of artifacts (e.g., fragments of tools, vestiges of utilitarian, nonutilitarian objects), features (e.g., remnants of walls, cooking hearths, midden deposits), and ecological evidence (e.g., pollen remaining from plants that were in the area when the activities occurred).
 - **Prehistoric archaeological sites** generally represent the material remains of Native American groups and their activities dating to the period before European contact. In some cases, prehistoric sites may contain evidence of trade contact with Europeans.
 - **Ethnohistoric archaeological sites** are defined as Native American settlements occupied after the arrival of European settlers in California.
 - **Historic archaeological sites** reflect activities during the Historic period (1772 and later).
- **Artifact:** An object that has been made, modified, or used by a human being.
- **Cultural Resource:** Expressions of human culture and history in the physical environment, and may include archaeological sites, buildings, structures, objects, districts, works of art, architecture, and natural features that were important in past human events. They may consist of physical remains, but also may include areas where significant human events occurred, even though evidence of the events no longer remains. Cultural resources also include places that are considered to be of traditional cultural or religious importance to social or cultural groups.
- **Cultural Resources Survey Area:** All areas of potential permanent and temporary project impacts evaluated in cultural resources studies as described herein.
- **Ethnographic:** Relating to the study of human cultures. “Ethnographic resources” represent the heritage resources of a particular ethnic or cultural group, such as Native Americans or African, European, Latino, or Asian immigrants. They may include traditional resource-collecting areas, ceremonial sites, value-imbued landscape features, cemeteries, shrines, or ethnic neighborhoods and structures.
- **Historic Period:** The period that begins with the arrival of the first nonnative population. In 1772, Commander Don Pedro Fages was the first European to enter the desert of Kern County, initiating the historic period in the project study area.
- **Historical Resource:** Used for the purposes of CEQA and defined in the State CEQA *Guidelines* (Section 15064.5) as: (1) a resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR); (2) a resource included in a local register of historical resources, as defined in Public Resources Code (PRC) Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of

California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

- **Holocene:** Of, denoting, or formed in the second and most recent epoch of the Quaternary period, which began 10,000 years ago at the end of the Pleistocene.
- **Isolate:** An isolated artifact or small group of artifacts that appear to reflect a single event or activity. Because isolates may lack identifiable context, and may not have the potential to add important information about a region, culture, or person, they are generally not considered under CEQA to be historical or unique archaeological resources (CEQA Statute Section 21083.2 and State CEQA *Guidelines* Section 15064.5).
- **Lithic:** Of or pertaining to stone. Specifically, in archaeology lithic artifacts are chipped or flaked stone tools, and the stone debris resulting from their manufacture.
- **Pleistocene (Ice Age):** An epoch in the Quaternary period of geologic history lasting from 1.8 million to 10,000 years ago. The Pleistocene was an epoch of multiple glaciation, during which continental glaciers covered nearly one fifth of the earth's land.
- **Prehistoric Period:** The era prior to 1772. The later part of the prehistoric period is also referred to as the protohistoric period in some areas, which marks a transitional period during which native populations began to be influenced by European presence resulting in gradual changes to their lifeways.
- **Quaternary Age:** The most recent of the three periods of the Cenozoic Era. It follows the Tertiary Period, spanning 2.588 ± 0.005 million years ago to the present. The Quaternary includes two geologic epochs: the Pleistocene and the Holocene Epochs.
- **Tribal Cultural Resources:** Defined in Assembly Bill (AB) 52 as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either included or determined to be eligible for inclusion in the CRHR or included in a local register of historical resources (PRC Section 21074 (a)(1)).
- **Unique Archaeological Resource:** This term is used for the purposes of CEQA and is defined in the State CEQA *Guidelines* (Section 15064.5) as an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it either contains information needed to answer important scientific research questions, has a special and particular quality such as being the oldest of its type or the best available example of its type, or is directly associated with a scientifically recognized important prehistoric or historic event or person.

4.5.2 Environmental Setting

As defined by EM Strategies (2021), the cultural Area of Potential Effects (APE) for the proposed project comprises approximately 3,271 acres as shown in grey shading on Figure 4.5-1, *Cultural Resources Study Area*. The APE is within a transition area between the Pacific Border and the Basin-and-Range physiographic provinces, where the northeastern edge of the

Tehachapi Mountains meets the western margin of the Mojave Desert in Kern County, California. The Tehachapi Mountains comprise one of southern California's Transverse Ranges, which are the only east/west-trending mountain ranges in California and connect the southern ends of the Coast Ranges to the west and the Sierra Nevada Mountains to the east. The Tehachapi Mountains extend for approximately 40 miles northeast/southwest and separate the San Joaquin Valley of California to the northwest from the Antelope Valley of the Mojave Desert to the southeast (EM Strategies 2021).

The APE includes the steep mountains and moderately sloping foothills of the northeastern Tehachapi Mountains just east of the northeast/southwest-trending Garlock Fault, as well as the westernmost valley margins of the Mojave Desert. Terrain varies within the project area and includes steep ridgelines, rocky hillsides, rolling hills, desert shrubland, and ephemeral washes (EM Strategies 2021).

The APE is surrounded by the Tehachapi Mountains to the west, Tehachapi Valley and the southern Sierra Nevada Mountains to the north, Fremont Valley to the northeast, and Antelope Valley to the east and south. Elevations in the vicinity of the APE range from 2,275 feet above mean sea level (amsl) within Rosamond Lake in Antelope Valley approximately 16 miles (25.6 kilometers) to the southeast of the APE up to 7,993 feet amsl atop Double Mountain in the Tehachapi Mountains roughly 6.9 miles (11.1 kilometers) to the west. The APE follows a bedded limestone formation that forms a ridge extending southwest from existing mining operations within the project site and comprises elevations ranging from 3,560 feet amsl along the valley margin at the east end of the project area to 5,362 feet amsl at the top of a peak within the Tehachapi Mountains in the west end of the APE (EM Strategies 2021).

Geologic deposits within the steep slopes and moderate foothills of the Tehachapi Mountains within the APE are mapped as Mesozoic plutonic rocks including granite, quartz monzonite, granodiorite, and quartz diorite, while the southwest-trending ridge that extends from the mountains to the foothills within the center of the APE is mapped as Paleozoic or Mesozoic marine sedimentary and metasedimentary rocks consisting of limestone, dolomite, and marble along the southwest-trending ridge throughout the APE. Deposits along the valley margin in the eastern part of the APE consist of Pleistocene marine and continental sedimentary rocks including older alluvium, lake, playa, and terrace deposits (Gutierrez et al. 2010) (EM Strategies 2021).

Soil within the APE is dominated by a Torriorthents-Rock outcrop complex on the mountain slopes and a Randsburg sandy loam along the pediments and alluvial fans (Natural Resources Conservation Service [NRCS] 2018). The Torriorthents-Rock outcrop complex is located on moderate to steep slopes, which comprises 33 percent of the APE and is characterized by a parent material of residuum weathered from basalt, granite, and sandstone presented as weathered and unweathered bedrock. The remaining soil within the mountain slopes and ridges of the APE is largely composed of loamy sand with various degrees of gravel. Within the foothills and rock pediment, Randsburg sandy loam comprises 32.7 percent of the APE and is characterized by residuum weathered from granite, presented as sandy loam atop weathered bedrock. The remaining soil on alluvial fans and terraces within the eastern part of the APE is mostly alluvium derived from granite and is composed of loamy sand atop sandy clay loam, sandy loam, and gravelly loamy sand (NRCS 2018) (EM Strategies 2021).

There is no permanent water within the APE, although several permanent water sources are located within 3.1 miles (5 kilometers) of the project site, including an unnamed spring approximately 0.7 mile (1.1 kilometer) to the southwest within Bean Canyon and another unnamed spring approximately 2.7 miles (3.8 kilometers) to the northwest. Oak Creek, which is an ephemeral creek bed that extends northeast and then south from the Tehachapi Mountains, borders the northern end of the APE. Numerous ephemeral washes/drainages of various sizes are also located within the area (EM Strategies 2021).

4.5.3 Cultural Setting

Prehistoric Setting

Environmental and climatic fluctuations, particularly those of the terminal Pleistocene/early Holocene (TP/EH) and Middle Holocene, had marked effects on the prehistoric inhabitants of southern California and the Mojave Desert. Paleoindians and later Archaic groups altered numerous aspects of their behavior, ranging from subsistence pursuits to technological organization. Such changes are observable in the archaeological record and offer important information regarding prehistoric lifeways. Numerous chronological sequences (e.g., Basgall 2000; Bettinger and Taylor 1974; Sutton 1996; Warren 1984; Warren and Crabtree 1986) have been developed over the last century to describe this cultural change within southern California and particularly for the Mojave Desert region. Of these chronologies, those proposed by Warren (1984) and Warren and Crabtree (1986) have most commonly been used to describe temporal change within the Mojave Desert, in which the prehistory of the region is divided into five distinct cultural periods. More recently, combining results from the last 20 years of fieldwork conducted in the Mojave Desert, Sutton et al. (2007) has condensed these distinct periods into a synthesis that corresponds more closely with those proposed for the adjacent Great Basin region (e.g., Elston 1986; Thomas 1988) and instead presents the prehistory of the region in terms of temporal shifts throughout the Terminal Pleistocene and Early, Middle, and Late Holocene (EM Strategies 2021).

Table 4.5-1, *Concordance of Mojave Desert Cultural Chronologies*, presents the relationship between these chronological sequences and summarizes diagnostic projectile points associated with each. A detailed discussion of prehistoric chronological sequence of the project area is provided in EM Strategies 2021 (see pp. 15-21) and incorporated here by reference.

Table 4.5-1 Concordance of Mojave Desert Cultural Chronologies

Period	Calibrated Years B.P.	Mojave Desert Complex ¹	Southern California Desert and Southwestern Great Basin Complex ²	Diagnostic Projectile Points
Late Pleistocene	Pre-12,000 to 10,000	Pre-Clovis (Pre-12,000 B.P.*)	--	Fluted (Clovis) Crescents
		Paleoindian (12,000-10,000 B.P.)	--	Great Basin Concave Base Western Stemmed

Table 4.5-1 Conformance of Mojave Desert Cultural Chronologies

Period	Calibrated Years B.P.	Mojave Desert Complex ¹	Southern California Desert and Southwestern Great Basin Complex ²	Diagnostic Projectile Points
Early Holocene	10,000 to 8,000	Lake Mojave (10,000-7,000 B.P.) Deadman Lake (9,500-7,200 B.P.)	Lake Mojave (10,000-7,000 B.P.)	Western Stemmed Crescents
Middle Holocene	8,000 to 4,000	Pinto (7,000-4,000 B.P.)	Pinto (7,000-4,000 B.P.)	Contracting Stemmed and Leaf-Shaped Pinto
Late Holocene	4,000 to Present	Gypsum (4,000-1,800 B.P.)	Gypsum (4,000-1,500 B.P.)	Gypsum Elko Humboldt
		Rose Spring (1,800-900 B.P.)	Saratoga Springs (1,500-800 B.P.)	Rose Spring Eastgate Saratoga Springs Triangular
		Late Prehistoric (900 B.P.-Contact)	Protohistoric (800 B.P.-Contact)	Desert Side-notched Cottonwood

Source: EM Strategies 2021.

Notes:

1. Based on Sutton 1996; Sutton et al. 2007. For consistency within EM Strategies (2021), ages reported as calibrated years before Christ (cal B.C.) and calibrated years anno Domini (cal A.D.) by Sutton (1996) and Sutton et al. (2007) were converted to calibrated years B.P. Ages reported as cal B.C. were converted by EM Strategies (2021) by adding 1950 (the year defined as the "present") to the cal BC age, while ages reported as cal A.D. were converted by subtracting the reported age from 1950. All converted ages are rounded up to the nearest one-hundredth.
2. Based on Warren 1984; Warren and Crabtree 1986.

Ethnographic Setting

The APE lies in the transition area between two different ethnographic territories – the Kawaiisu to the north and the Kitanemuk to the south.

The Kawaiisu primarily occupied a territory within the southern Sierra Nevada Mountains and the northern Tehachapi Mountains, although they moved into the western Mojave Desert to exploit resources on a seasonal basis (Zigmond 1986). The antiquity of the Kawaiisu occupation in this area is not well-known (Sutton 1987:70), but Kroeber (1976:601) argued that they split from the Chemehuevi of the western Mojave Desert relatively late in time and moved westward into the southern Sierra Nevada and northern Tehachapi Mountains. Sutton (1991) has suggested that the core area of the Kawaiisu shifted from the western Mojave Desert to the southern Sierra Nevada Mountains as a result of a warmer and drier climatic period that began at about 1,000 before present (B.P.) (for purposes of EM Strategies 2021 "present" is defined as the year 1950). Linguistically, Kawaiisu has been identified as part of the Southern Numic branch of the Uto-Aztecan language family (Mithun 2006:539) (EM Strategies 2021).

Given that the Sierra Nevada Mountains are often seen as the division between the California and Great Basin cultures, the Kawaiisu exhibited certain traits of both cultural regions (Zigmond 1986). Kawaiisu groups primarily occupied the mountains and foothills of the Sierra Nevada and Tehachapi Mountains during the hot summer and spring seasons and would move regularly into the lower elevations of the western Mojave Desert during the cooler months. Traditional summer structures consisted of open, flat-roofed shade houses (havakahni), while winter structures were tomo-kahni, which were above-ground circular structures featuring a center smoke hole and a frame of vertical and transverse posts bound together and covered with brush, bark, willow, and tule mats. Other structures included earth-covered sweathouses (tivikahni), circular brush enclosures, and small graneries (Zigmond 1986). Kawaiisu groups lived in chieftainships generally based on familial ties, and the role of chief was acquired by the possession of wealth (Kroeber 1976). Jimson weed and tobacco were used for religious ceremonies and Kawaiisu shamans practiced rain magic for healing purposes (Whitley 2000) (EM Strategies 2021).

Kawaiisu subsistence was based on hunting, fishing, and gathering, with acorn processing among one of their main subsistence strategies. Pinyon nuts, seeds, shoots, leaves, bulbs, tubers, and berries were gathered in the higher elevations during the warmer months and were stored in small granaries standing two or more feet off the ground. Large and small mammals that were hunted included deer, mountain sheep, antelope, bear, squirrels, mice, and rabbits (Zigmond 1986) (EM Strategies 2021).

Kawaiisu material culture consisted of numerous types of basketry including seedbeaters, burden baskets, winnowers, trays, containers, and hoppers, as well as lithic items associated with food preparation, such as bedrock mortars, pestles, portable metates, manos, and knives (i.e., bifaces). Pottery and marine shell artifacts also occur at Kawaiisu archaeological sites, but these items are rare and appear to have been most likely acquired through trading (Zigmond 1986) (EM Strategies 2021).

The Kitanemuk were a relatively small group who occupied the northeast Tehachapi Mountains and the northwestern edge of Antelope Valley (Kroeber 1976:611). This group is one of the least-known ethnographic groups of California, despite the fact that they are considered to have been the primary inhabitants of Antelope Valley (Sutton 1980). Kroeber (1976:611) suggested that the Kitanemuk were a subdivision of the Serrano group of California Shoshonean tribes and thus spoke a language that was part of the Takic branch of the Uto-Aztecan language family (EM Strategies 2021).

Similar to the Kawaiisu, the Kitanemuk primarily occupied the mountains and foothills of their territory and ventured into the Mojave Desert for seasonal resources, although Sutton (1980:221) argued that their core territorial base moved from Antelope Valley to the Tehachapi Mountains around 300 cal B.P. Although scant, ethnographic data indicates that after that time, Kitanemuk groups lived in semi-permanent village sites in the Tehachapi Mountains that functioned as base camps year-round, making forays into Antelope Valley during the late winter result of a warmer and drier climatic period that began at about 1,000 and early spring (Blackburn and Bean 1978). Although some parts of their social organization were alike to other Takic-speaking groups, Blackburn and Bean (1978:564) suggested that Kitanemuk ceremonies, rituals, and mythology appear to have been mostly influenced by their Kawaiisu

and Tubatulabal neighbors to the north and the Chumash to the west. Groups lived in communal pole and tule houses with individual family rooms organized around a circular court with entrances on two sides. They were patrilineally organized under a chief, ceremonial manager, or shaman, who was responsible for maintaining order in the village. Also similar to the Kawaiisu, Jimson weed and tobacco were used during rituals and shamans treated illness and practiced rain magic (Kroeber 1976) (EM Strategies 2021).

Kitanemuk subsistence was also very much like the Kawaiisu, and was based on hunting, fishing, and gathering, with acorns and pinyon nuts as their staple resources. Seeds, shoots, leaves, tubers, bulbs, and berries were collected, and hunted game included deer, antelope, mountain sheep, bear, squirrels, mice, and rabbits. Material culture is also represented similarly to their neighboring tribes, with basketry, bedrock mortars, and ground stone observed during ethnographic study and in the archaeological record. Kitanemuk groups appear to have traded often with the inland and coastal Chumash groups to the west (Blackburn and Bean 1978; Kroeber 1976) (EM Strategies 2021).

Historic Setting

The post-contact history of southern California is generally divided into three periods: (1) the Spanish period (1769 to 1822); (2) the Mexican period (1822 to 1848); and (3) the American period (1848 to present). The first known European exploration of the project region occurred in 1772 by a group of Spanish soldiers led by Pedro Fages, who ventured to the area in search of deserters from the Spanish Army. In 1776, the Spanish Franciscan Friar Francisco Garcés traversed through the valley in route from the Colorado River along an ethnographic route known as the Mohave Trail – which later became the western segment of the Old Spanish Trail – and then through Oak Creek Pass through the Tehachapi Mountains on his way back to the Mojave Desert (California Office of Historic Preservation [California OHP] 2018; Hoover et al. 2002) (EM Strategies 2021).

After the Mexican Revolution succeeded against the Spanish crown in 1821, the Mexican government began granting large ranchos to prominent Mexican citizens. Three of these ranchos were located in the vicinity of the project area, including Rancho de Castac extending from Lake Castac near Lebec through the Tehachapi Mountains to Grapevine in the north, granted in 1843 to José Maria Covarrubias, Rancho Tejón extending from the Kern River in the north to the Tehachapi Mountains in the south, granted in 1843 to José Aquirre and Ignacio del Valle, and Rancho la Liebre located on the border of Kern and Los Angeles Counties along the southeastern edge of the Tehachapi Mountains, granted to José Maria Flores in 1846 (Hoover et al. 2002). Other explorations into the region included Jedediah Smith's expedition in 1826 and 1827 along the Old Spanish Trail, which crossed the Mojave Desert, Ewing Young's fur trapping expedition along the same route in 1829 and 1830, of which Kit Carson was among the crew, and Kit Carson and John C. Fremont's later expedition into the Tehachapi Mountains and Mojave Desert in 1844 and 1845 (Grayson 2011; Hoover et al. 2002) (EM Strategies 2021).

Transportation

The transportation history of southern California, like many other areas throughout the west, was primarily driven by a need to carry people and supplies between the established eastern

states and the developing west. Wagon roads and railroads were required to transport people as well as large amounts of machinery, equipment, ore, dry goods, and food over long distances and across diverse and difficult terrain. The first trails through the Mojave Desert consisted of early exploration trails that transformed into overland routes for people heading west to California. One of the first of these routes was the Old Spanish Trail, which followed the ethnographic Mohave Trail west from Santa Fe, New Mexico to Los Angeles, California, and was used primarily between 1830 and 1848 (von Till Warren 2004). Other early routes that crossed the southern California deserts included the Southern Overland Trail (i.e., Yuma Route, Gila Trail, Butterfield Stage Route), Brown's Wagon Road, the Bradshaw Trail, and Brown and Frink's Road (EM Strategies 2021).

Most of the emigrants that ended up settling in southern California traveled west from the eastern states and stopped in Texas before following the Southern Overland Trail, which ran west from Austin, Texas to El Monte, California. As gold was discovered throughout southern California and mines were quickly established to the north, small stage routes slowly came into development to connect the southern terminus of the emigrant trail to inland California. One of these routes, which would eventually extend through the Oak Creek pass to Tehachapi, was first considered a viable option in 1851 when the Los Angeles Court of Sessions granted right-of-way access across the San Francisco Rancho, a Mexican land grant in northern Los Angeles and Ventura Counties. Initially referred to as the "Tulare Road to the Mines," the southern end of this route did not truly become passable by wagon road until 1854, when the establishment of Fort Tejon and the discovery of gold on the Kern River to the north made it apparent that a better wagon road northward was needed (Barras 1976:17-18). The most trying obstacle on this route was the San Fernando Pass, now known as Beale's Cut, located to the northwest of El Monte in the southern segment of the early route. In 1854, at the cost of \$1,000, the county formed a road district and improved this section of the road, cutting through the solid rock and creating a wagon pass through the bedrock. This pass was further cut fifty feet deep into the sandstone by pick and shovel when Lieutenant Edward F. Beale was appointed as the federal Surveyor General of California and Nevada and was awarded a franchise to collect tolls for the pass in 1862 (Barras 1976). From San Fernando Pass, the route extended north through San Francisquito Canyon and then northeast to Elizabeth Lake, where the trail split. One route headed northwest to the San Joaquin Valley and Tejon, and one route extended to the northeast through Willow Springs and then north across Oak Creek and Oak Creek Pass to Tehachapi where previous expeditions (Jedediah Smith in 1827, Ewing Young and Kit Carson in 1830, and John C. Fremont and Kit Carson in 1844) had traveled in the early days of California exploration (Barras 1976:23-24) (EM Strategies 2021).

Several stage stops existed along this route since the early 1860s, including a station at Willow Springs and one at Oak Creek, adjacent to and northwest of the APE. Following another gold discovery in the Coso Range at the southeast end of Owens Valley in 1861, a "new road to Coso" was established, which ran north from Elizabeth Lake to Willow Springs and then seemingly ran northeast and roughly followed current California State Route 14 (SR-14). According to an 1862 Los Angeles newspaper, some travelers alternatively decided to follow the Tehachapi Willow Springs route north to Oak Creek for water and rest at the station before heading east to the valley (Barras 1976:26). Another gold discovery in Clear Creek south of current Lake Isabella in 1865 brought about the mining town of Havilah and a wagon road was

constructed from the Oak Creek Station north along what is now Cameron Road, through Tehachapi Valley, and then along Tollgate Canyon. At least two different stage lines traveled this route weekly, one operated by John J. Tomlinson and one by George Andrews, making stops at Oak Creek Station. A mail route was also soon established along the road between Los Angeles and Havilah (Barras 1976:30-31). This stage route was frequently traveled throughout the late nineteenth century until General Edward F. Beale, who had owned the lands of the stage route since 1862, denied the Southern Pacific Railroad right-of-way access to the property in the late 1870s. This resulted in the railroad bypassing the community of Willow Springs and the stage coach service through the region soon ended as transportation and settlement shifted to those developments located closer to the railway (Barras 1976; Tipton 1988) (EM Strategies 2021).

The segment of the route that extends north from Willow Springs to Tehachapi is currently named Tehachapi Willow Springs Road and is first depicted on the 1856 General Land Office (GLO) plat map for T11N, R14W, in which it is depicted as the “Los Angeles and Tehachapi Road.” The route is also visible on G. M. Wheeler’s 1878 and 1879 USGS Atlas Sheet Number 73A maps entitled “Land Classification Map of Part of Southern California” and “Part of Southern California,” in which the route is depicted as “Los Angeles Road.” G. M. Wheeler’s Atlas maps also show Oak Creek Station and the Coso route towards Cameron to the northeast and then north within White Rock Creek (EM Strategies 2021).

Despite the various overland wagon routes that developed early on between the eastern states and California, the transportation of people and supplies from east to west was still an arduous and expensive process. After the initial excitement of the 1848 California Gold Rush died down and the pace of mining declined, the population and economic growth of California waned and the hazards of transportation began to discourage immigration to the state (Orsi 2005:3). In order to address these issues and driven by the developing success of railroads throughout the eastern states, the idea for the Central Pacific Railroad emerged and the Central Pacific Railroad Company was organized in 1860. The approximately 700-mile-long railway was finally completed in Promontory, Utah, on May 10, 1869, where it merged with the Union Pacific Railroad to create the first Transcontinental Railroad (Orsi 2005:17). This major event in United States transportation history had brought together the “Big Four,” the four major investors in the Central Pacific Railroad that emerged as the associates of the enterprise – Collis P. Huntington, Mark Hopkins, Charles Crocker, and Leland Stanford. As dozens of railways were organized throughout the west during the late 1860s, many of them were quickly acquired by the Big Four and became incorporated into the Central Pacific Railroad as new lines (Orsi 2005:18-19). The Big Four purchased and took control of the Southern Pacific Railroad enterprise in 1868, and immediately following the completion of the Central Pacific Railroad in 1869, construction of the line began south into the San Joaquin Valley from the Transcontinental line at Lathrop. By 1874, the railway had been constructed as far south as Bakersfield, and by 1876 the route had been extended east through the Tehachapi Mountains into Antelope Valley and south through what would become the towns of Mojave, Lancaster, and Palmdale following current SR-14 (Orsi 2005) (EM Strategies 2021).

Settlement

Historic settlement within the western Mojave Desert and the northeastern Tehachapi Mountains was driven primarily by early cattle ranching and agricultural prospects and later by the coming of the Southern Pacific Railroad. The earliest non-Native settlers in the region were comprised of prominent Mexican citizens that had been granted large ranchos by the Mexican government. The community of Willow Springs was the first settlement to develop in the region, which was visited early on by numerous explorers. From 1861 onward, a stagecoach and freight stop were in operation at Willow Springs to serve as a watering hole and rest stop for travelers on the stage road to the Coso mines and the Los Angeles to Havilah stage route (Barras 1976). After the Southern Pacific Railroad bypassed the town, use of the stage road diminished and the population of Willow Springs plateaued until the 1910s when Ezra M. Hamilton constructed a number of stone buildings with the intention of transforming the settlement into a resort town (Tipton 1988) (EM Strategies 2021).

A post office labeled “Tahichipa” was established just east of Tehachapi along the Los Angeles to Havilah stage route as early as 1868 (Barras 1976:137) and various cattle ranchers, sheep herders, farmers, and miners had begun settling the Tehachapi Valley early on, however, the town of Tehachapi was not really considered a community until the arrival of the Southern Pacific Railroad in 1876, at which time a new town originally named Summit Station sprung up adjacent to the railway tracks. The town continued to grow slowly but steadily throughout the late 1800s, and the city of Tehachapi was officially incorporated in 1909 (Barras 1976) (EM Strategies 2021).

Mining

The mining of various minerals in the vicinity of Antelope Valley and the Tehachapi Mountains was closely linked to the development of the region. Following the 1848 California Gold Rush, displeased prospectors travelled south from northern California to seek success in the southern Sierra Nevada rivers. By the early 1860s, precious minerals had also been discovered north of the project area in the Kern River Valley near present day Lake Isabella, and several mining camps emerged, including the Williamsburg, Washington, Quartzburg, and Whiskey Flat townsites (Brewer 2001) (EM Strategies 2021).

The mining of limestone emerged in the project region as a worthwhile commercial enterprise as a high-quality source of marble was discovered north of Tehachapi in 1877 and the operation of a quarry soon commenced, which later became known as the Golden Vein Marble Works (Barras 1973). That same year, John Norboe and his partner I. B. Malin built a small limestone kiln for the production of cement in Antelope Canyon south of Tehachapi and produced approximately 500 barrels of lime, which was shipped to Bakersfield and Los Angeles for local use (Barras 1973; Vredenburg 1991). In 1878, F. O. Wyman entered the limestone extraction and lime production business and established the Summit Lime Company, operating a quarry from the mid-1880s until 1929. By 1888, at least 12 similar kilns were in operation or under construction within the mountains surrounding Tehachapi, and by 1894 lime was being shipped to other towns throughout Southern California (Vredenburg 1991) (EM Strategies 2021).

The commercial limestone industry expanded even further after the early 1950s when CalPortland Company (CPC, the project proponent) Board of Directors in Los Angeles,

California, decided to construct a cement plant on the western end of Antelope Valley west of Mojave. Property within Oak Creek Canyon was purchased by the company in 1952 in order to secure enough water to run the plant, and in 1953 CPC purchased a large, undeveloped limestone reserve on the south end of Oak Creek Road. The material needed for the construction of the CPC Mojave plant necessitated the development of a nine-mile-long railroad spur from the existing Southern Pacific and Union Pacific railway line at Mojave, which was named the Creal (i.e., Oak Creek) spur after CPC's chief chemist, Wilson Creal Hanna. The small Creal branch first ran a train in 1955 and supplies and a labor force were transported on the railroad spur between Mojave and the location selected for the development of the cement plant. Construction of the first two kilns at the Mojave plant was initiated later that same year (Wilson 1991) (EM Strategies 2021).

The CPC Mojave plant began shipping Mojave portland cement out in bulk the following year to Mojave, and three additional kilns were constructed in 1957 and 1958. By 1964, the Mojave plant was the highest producing CPC cement plant, providing 6.5 million barrels of the overall 14 million barrels produced by CPC during that year (St. James Press 1998). Additional plant facilities were constructed in 1970, which included a 2,000-horsepower finish mill (i.e., cement mill or ball mill) and a bulk loading facility. In 1978, the Mojave Modernization Project was initiated and an additional kiln with a preheater flash calcining tower was constructed, doubling the amount of cement produced at the plant and requiring the development of a second quarry at the site (Wilson 1991) (EM Strategies 2021).

Existing Cultural Resources

Methods Used to Identify Known Cultural Resources

As defined by EM Strategies (2021), the cultural Area of Potential Effects (APE) for the proposed project comprises approximately 3,271 acres as shown in grey shading on **Figure 4.5-1, Cultural Resources Study Area**. To identify potential presence of cultural resources within the project site and to evaluate the project's potential effects on significant cultural resources, cultural resources studies were prepared for this APE as discussed below.

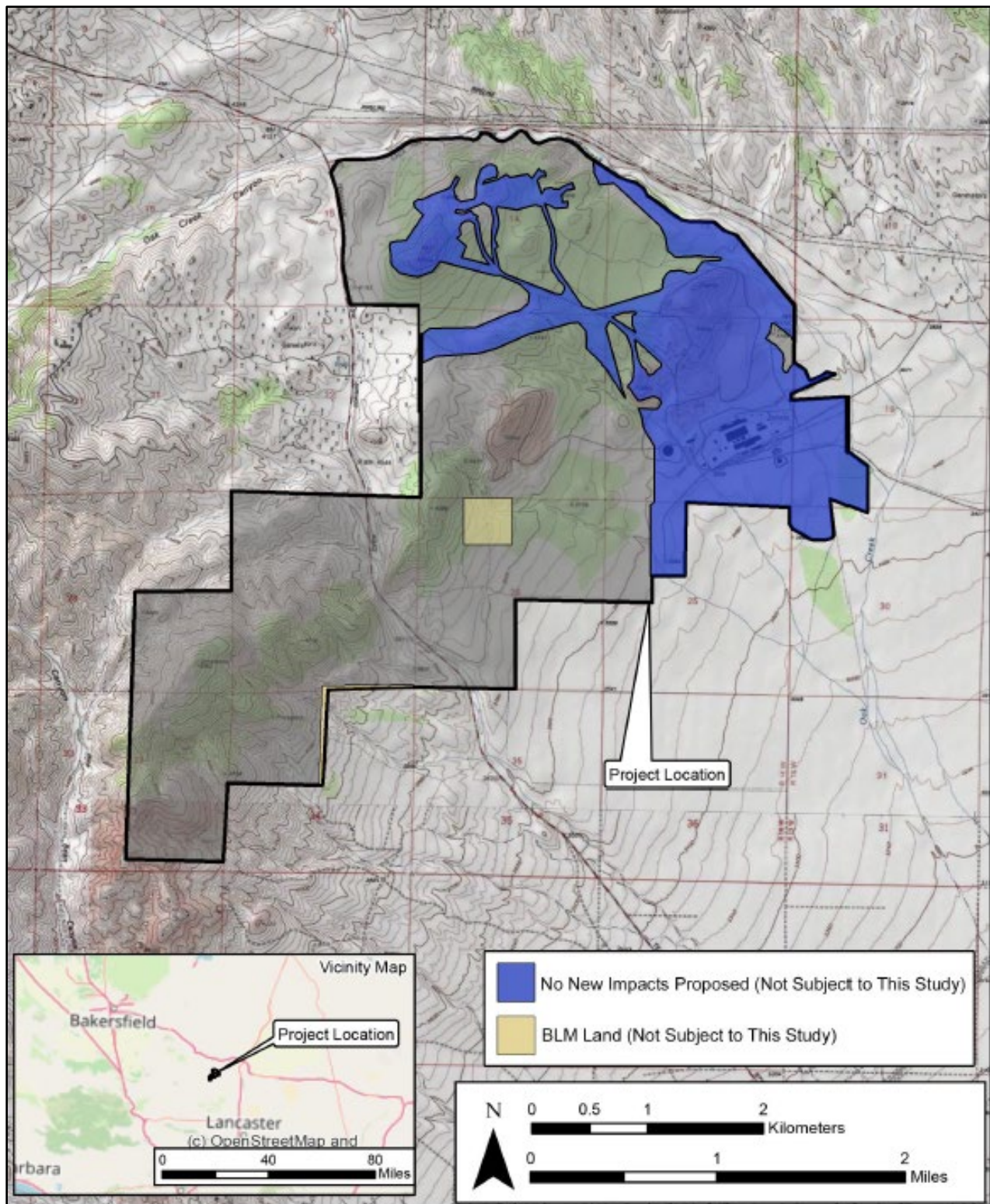


Figure 4.5-1
Cultural Resources Study Area

SSJVIC Records Search

Prior to conducting fieldwork, EM Strategies completed a records search of California Historical Resources Information Center (CHRIS) data with the Southern San Joaquin Valley Information Center (SSJVIC) at California State University, Bakersfield for an area encompassing a one-mile radius around the APE. EM Strategies also consulted online records, including a review of available historic topographic and GLO maps and generated a Mining Claim Geographic Report using the BLM's Legacy Rehost (LR2000) System, which provided a list of both active and closed mining claims in the area by Section. Within the one-mile radius records search area, EM Strategies determined that 69 previous surveys have been completed. A total of 70 previously recorded sites were identified within the one-mile radius records search area. The majority of these sites are prehistoric (41 sites), while the rest are historic (22 sites), multicomponent (6 sites), and one unknown. EM Strategies determined that of the 70 sites, two are located within the APE and consist of a prehistoric bedrock milling and lithic scatter habitation site (CAKER-3393 / P-15-003393) and a segment of the historic Tehachapi Willow Springs Road (CA-KER-9266H / P-15-016877). A complete listing of previous studies and previously recorded sites are available in EM Strategies 2021 (Tables 4 and 5) included as **Appendix E.1** of this EIR.

Field Surveys

A Phase I cultural resource inventory was conducted in December 2007 by ASM Affiliates, Inc. (ASM) within 2,001 acres including 1,961 acres within the APE as well as approximately 40 acres administered by the Bureau of Land Management, California Desert District, Ridgecrest Field Office (BLM) (shown in Figure 4.5-1 as "BLM Land (Not Subject to this Study)"). In 2016, CalPortland contracted EM Strategies to inventory the remaining 1,310 acres of the APE. EM Strategies did not re-inventory the 2,001 acres originally surveyed by ASM, but instead revisited and updated previously identified archaeological resources within ASM's inventory area to ensure that recording met current professional guidelines and standards. Although the APE surrounds the 40-acre parcel administered by the BLM, the project excludes this parcel and therefore EM Strategies did not revisit or update archaeological resources within it; however, draft Department of Parks and Recreation (DPR) 523 series site forms, photos, and Geographic Information Systems (GIS) data were provided to the BLM for their files (EM Strategies 2021).

Archaeological fieldwork was conducted by ASM's Project Archaeologist Sherri Andrews between December 10 and 20, 2007, and by EM Strategies' Archaeologist and Field Director Danielle C. Felling, M.A. between January 18 and 25, 2018, and February 2 and 4, 2018. A total of 19 newly recorded archaeological resources (M-DF-01, M-DF-02, M-DF-04, M-DF-05, M-DF-07, M-DF-08, M-DF-09, M-DF-10, M-DF-11, M-DF-12, M-DF-13, M-DF-14, ASM-02, ASM-03, ASM-06, ASM-08, ASM-09, ASM-10) and 52 isolated finds were identified during ASM's and EM Strategies' inventory of the APE. Additionally, one previously identified archaeological resource (CA-KER-3393 / P-15-003393) was revisited and re-recorded, and one segment of a previously recorded linear site (CA-KER-9266H / P-15-016877) was identified and recorded within the APE (EM Strategies 2021).

Of the 19 newly identified archaeological resources, nine are prehistoric, nine are historic, and one is a multicomponent site. Of these, two sites (M-DF-08 and ASM-01) were recommended

by EM Strategies (2021) as potentially eligible for listing in the California Register of Historical Resources (CRHR) under Criterion 4 pending subsurface testing during an Extended Phase I study. The remaining 17 sites were recommended by EM Strategies (2021) as not eligible for listing in the CRHR under any evaluation criteria, and no further study is necessary to determine their CRHR eligibility (EM Strategies 2021). Of the ASM previously identified archaeological resource (CA-KER-3393 / P-15-003393) EM Strategies (2021) recommended the site as potentially eligible for listing in the CRHR under Criterion 4 pending subsurface testing during a Phase II study, and of the ASM previously recorded linear site (CA-KER-9266H/ P-15-016877) EM Strategies (2021) recommended the linear site as potentially eligible for listing in the CRHR under Criterion 1 pending additional research and full recordation of the entire linear resource during an Extended Phase I study (EM Strategies 2021). Of the 52 isolated finds identified, 13 are prehistoric, 37 are historic, one is multicomponent, and one is of unknown age, all of which were recommended by EM Strategies (2021) as not eligible for listing in the CRHR under any evaluation criteria.

Subsequent to and in consideration of EM Strategies (2021) conclusions and recommendations, BCR Consulting LLC (BCR) completed Phase II cultural resource eligibility evaluations for resources including those recommended as potentially eligible for listing on the CRHR or otherwise warranting additional study. BCR documented its findings in the *Phase II Cultural Resources Eligibility Evaluations, CalPortland Mojave Facility Project, Kern County, California*, dated July 17, 2025 (BCR 2025) included as **Appendix E.2** of this EIR.

A summary of the sites evaluated by BCR and BCR's conclusions is provided in **Table 4.5-2, Summary of Phase II Evaluation Sites and Conclusions**.

Table 4.5-2 Summary of BCR (2025) Site Evaluation Conclusions

Site ID	Site Character	Summary of BCR (2025) Site Evaluation Conclusions
M-DF-10	Historic-period homestead site.	The site is ineligible for listing on the CRHR and is not a historical resource under CEQA. The site is not a unique archaeological resource.
CA-KER-9266	Historic-period Road.	Tehachapi Willow Springs Road is associated with important events (CRHR Criterion 1), the diminished integrity has negated that association, particularly for the segment within the project site and for the period of significance. Therefore, the site is ineligible for listing on the CRHR and is not a historical resource under CEQA and is not a unique archaeological resource.
M-DF-08	Prehistoric resource processing site.	The site is ineligible for listing on the CRHR and is not a historical resource under CEQA. The site is not a unique archaeological resource.
ASM-01	Prehistoric resource processing site.	The site is ineligible for listing on the CRHR and is not a historical resource under CEQA. The site is not a unique archaeological resource.
CA-KER-3393	Prehistoric resource processing site.	The site is ineligible for listing on the CRHR and is not a historical resource under CEQA. The site is not a unique archaeological resource.

Table 4.5-2 Summary of BCR (2025) Site Evaluation Conclusions

Site ID	Site Character	Summary of BCR (2025) Site Evaluation Conclusions
ASM-02	Prehistoric resource processing site.	The site is ineligible for listing on the CRHR and is not a historical resource under CEQA. The site is not a unique archaeological resource.
ASM-03	Prehistoric resource processing site.	The site is ineligible for listing on the CRHR and is not a historical resource under CEQA. The site is not a unique archaeological resource.
ASM-06	Prehistoric resource processing site.	The site is ineligible for listing on the CRHR and is not a historical resource under CEQA. The site is not a unique archaeological resource.
ASM-09	Prehistoric resource processing site.	The site is ineligible for listing on the CRHR and is not a historical resource under CEQA. The site is not a unique archaeological resource.
M-DF-02	Prehistoric resource processing site.	The site is ineligible for listing on the CRHR and is not a historical resource under CEQA. The site is not a unique archaeological resource.
M-DF-12	Prehistoric resource processing site.	The site is ineligible for listing on the CRHR and is not a historical resource under CEQA. The site is not a unique archaeological resource.
M-DF-13	Prehistoric resource processing site.	The site is ineligible for listing on the CRHR and is not a historical resource under CEQA. The site is not a unique archaeological resource.

Source: BCR 2025.

As shown in **Table 4.5-2**, BCR (2025) evaluated five sites (three prehistoric and two historic-period) for eligibility for CRHR listing – prehistoric sites M-DF-08, ASM-01, and CA-KER-3393, and historic sites M-DF-10 and CA-KER-9266H. BCR’s evaluation concluded that four of the five resources (M-DF-08, ASM-01, CA-KER-3393, and M-DF-10) have been subject to evaluation and are recommended ineligible for listing in the CRHR. CA-KER-9266H was recommended potentially eligible for CRHR under Criterion 1, due to association with 19th Century American expansion of roadways and the California gold rush. However, BCR’s evaluation concluded that the segment of the linear alignment that crosses the project site has diminished integrity which prevents it from conveying that significance within the project site and that diminished integrity of the segment that crosses the project site negates that eligibility for CRHR listing (BCR 2025). BCR (2025) also performed additional evaluation of seven prehistoric resource sites previously determined ineligible for CRHR listing but warranting additional evaluation. These included ASM-02, ASM-03, ASM-06, ASM-09, M-DF-02, M-DF-12, and M-DF-13.

BCR subjected the sites to intensive survey and limited subsurface testing during the Phase II analysis, and based on the results, BCR concluded that no cultural resources identified within the project site are recommended historical resources under CEQA (BCR 2025).

Native American Outreach

The Lead Agency sent consultation notification to applicable Native American tribes in accordance with AB 52. Responses were received as summarized in **Table 4.5-3, Summary of AB 52 Consultation Efforts**.

Table 4.5-3 Summary of AB 52 Consultation Efforts

Tribe/Organization	Consultation Type	Date Letter Mailed	Response Received
Tejon Indian Tribe (Attn: Candice Garza)	AB 52	7/8/24	No response or request for consultation was received from Tejon Indian Tribe.
Torres Martinez Desert Cahuilla Indians (Attn: Michael Mirelez, Cultural Resources Coordinator)	AB 52	7/8/24	No response or request for consultation was received from Torres Martinez Desert Cahuilla Indians.
Twenty-Nine Palms Band of Mission Indians (Attn: Anthony Madrigal Jr., Tribal Grants Administrator)	AB 52	7/8/24	No response or request for consultation was received from Twenty-Nine Palms Band of Mission Indians.
Twenty-Nine Palms Band of Mission Indians (Attn: Darrell Mike, Tribal Chairman)	AB 52	7/8/24	No response or request for consultation was received from Twenty-Nine Palms Band of Mission Indians.
Yuhaaviatam of San Manuel Nation (Attn: Alexandra McCleary, Ph.D.)	AB 52	7/8/24	On July 15, 2024, Eunice Ambriz, Cultural Resources Technician, replied via email to Kern County (Randall Cates) on behalf of Yuhaaviatam of San Manuel Nation, expressing appreciation for the opportunity to review project documentation and advising that the project is located outside of the Serrano ancestral territory and that the Yuhaaviatam of San Manuel Nation would not be requesting consultation party status.

While no tribal cultural resources have been identified within the project site through consultation with Native American representatives, the potential exists for tribal cultural resources to be encountered. Implementation of Mitigation Measures **MM 4.5-1** through **MM 4.5-3** would reduce potential impacts to a less-than-significant level.

4.5.4 Regulatory Setting

Federal

Section 106 of the National Historic Preservation Act of 1966

Archaeological resources are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (16 United States Code [USC] 470f), and its implementing regulation, Protection of Historic Properties (36 Code of Federal Regulations [CFR] Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing an “undertaking” (e.g., issuing a federal permit), NHPA Section 106 requires federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the NRHP. As indicated in NHPA Section 101(d)(6)(A), properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the NRHP. Under the NHPA, a resource is considered significant if it meets the NRHP listing criteria at 36 CFR 60.4.

National Register of Historic Places

The NRHP was established by the NHPA as “an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation’s historic resources and to indicate what properties should be considered for protection from destruction or impairment” (36 CFR 60.2). The NRHP recognizes both historical period and prehistoric properties, including archaeological sites, that are significant at the national, State, and local levels.

To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria (U.S. Department of the Interior 1995):

- **Criterion 1:** Are associated with events that have made a significant contribution to the broad patterns of our history;
- **Criterion 2:** Are associated with the lives of persons significant in our past;
- **Criterion 3:** Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- **Criterion 4:** Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for NRHP listing (U.S. Department of the Interior 1995). In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as “the ability of a property to convey its significance” (U.S. Department of the Interior 1995). The NRHP

recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity, a property must possess several, and usually most, of these seven qualities. Thus, the retention of the specific qualities of integrity is paramount for a property to convey its significance. The seven qualities that define integrity are location, design, setting, materials, workmanship, feeling, and association.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from Federal and Tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. NAGPRA requires any Federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

State

California Register of Historical Resources (CRHR)

Under PRC Section 5024.19(a), the CRHR was created in 1992 and implemented in 1998 as “an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the State’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change.” Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys or designated by local landmarks programs, may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

- **Criterion 1:** It is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
- **Criterion 2:** It is associated with the lives of persons important in our past.
- **Criterion 3:** It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
- **Criterion 4:** It has yielded, or may be likely to yield, information important in history or prehistory.

Furthermore, under PRC 5024.1, California Code of Regulations (CCR) Section 4852(c), a cultural resource must retain integrity to be considered eligible for the CRHR. Specifically, it must retain sufficient character or appearance to be recognizable as a historical resource and

convey reasons of significance. Integrity is evaluated with regard to retention of such factors as location, design, setting, materials, workmanship, feeling, and association.

Typically, an archaeological site in California may be recommended eligible for listing in the CRHR based on its potential to yield information important in prehistory or history (Criterion 4). Important information includes chronological markers such as projectile point styles or obsidian artifacts that can be subjected to dating methods or undisturbed deposits that retain their stratigraphic integrity. Sites such as these have the ability to address research questions. However, archaeological sites may also be recommended eligible under CRHR Criteria 1, 2, and/or 3.

California Historical Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the County Board of Supervisors (or the City or Town Council in whose jurisdiction it is located); be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. The specific standards now in use were first applied in the designation of CHL #770; CHLs #770 and above are automatically listed in the CRHR.

To be eligible for designation as a landmark, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type in the state or within a large geographic region (northern, central, or southern California);
- It is associated with an individual or group having a profound influence on the history of California; or
- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest (PHI) are sites, buildings, features, or events that are of local (City or County) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. PHI designated after December 1997 and recommended by the State Historical Resources Commission (SHRC) are also listed in the CRHR. No historic resource may be designated as both a landmark and a point. If a point is later granted status as a landmark, the point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a PHI, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type within the local geographic region (City or County);
- It is associated with an individual or group having a profound influence on the history of the local area; or
- It is a prototype of, or an outstanding example of, a period, style, architectural movement, or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State and is codified at PRC Section 21000 et seq. CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or archaeological resources.

Under CEQA (Section 21084.1), a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. The State CEQA *Guidelines* (14 CCR Section 15064.5) recognize that a historical resource includes: (1) a resource listed in, or determined to be eligible by the SHRC, for listing in the CRHR; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

If a lead agency determines that an archaeological site is a historical resource, the provisions of CEQA Section 21084.1 and Section 15064.5 of the State CEQA *Guidelines* apply. If a project may cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired) in the significance of a historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (State CEQA *Guidelines* Sections 15064.5(b)(1), 15064.5(b)(4)).

If an archaeological site does not meet the historical resource criteria contained in the State CEQA *Guidelines*, then the site may be treated in accordance with the provisions of Section 21083, which is a unique archaeological resource. As defined in Section 21083.2 of CEQA a "unique" archaeological resource is an archaeological artifact, object, or site, for which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;

- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in State CEQA *Guidelines* Section 21083.2, then the site is to be treated in accordance with the provisions of Section 21083.2, which state that if the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place (Section 21083.1(a)). If preservation in place is not feasible, mitigation measures shall be required.

The State CEQA *Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (State CEQA *Guidelines* Section 15064.5(c)(4)).

Native American Heritage Commission

PRC Section 5097.91 established the NAHC, the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

Assembly Bill 52 and Related Public Resources Code Sections

AB 52 was approved by California State Governor Edmund Gerald “Jerry” Brown, Jr. on September 25, 2014. The act amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation (NOP) or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) define tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the CRHR or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources update to Appendix G of the State CEQA *Guidelines*, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency provide formal notification to the designated contact, or a tribal representative,

of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency's formal notification and the lead agency must begin consultation within 30 days of receiving the tribe's request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project's impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2(b)).

If a California Native American tribe has requested consultation pursuant to PRC Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an EIR or adopt an MND (PRC Section 21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

California Public Records Act

California Public Records Act Sections 6254(r) and 6254.10 were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another State agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a State or local agency."

California Native American Graves Protection and Repatriation Act of 2001

Codified in California Health and Safety Code Sections 8010–8030, the California Native American Graves Protection and Repatriation Act (Cal NAGPRA) is consistent with the Federal NAGPRA. Intended to “provide a seamless and consistent state policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect,” Cal NAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The Cal NAGPRA also provides a process for non-Federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

California Health and Safety Code Sections 7050 and 7052

California Health and Safety Code Section 7050.5 declares that, in the event of the discovery of human remains outside of a dedicated cemetery, ground disturbance of the site or any nearby area reasonable suspected to overlie adjacent remains must cease until the Coroner in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

California Penal Code Section 622.5

The California Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands, but specifically excludes the landowner.

California Public Resources Code Section 5097.5

PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

Local

Kern County General Plan

The policies, goals, and implementation measures in the *Kern County General Plan* for cultural resources applicable to the project are provided below. The *Kern County General Plan* contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development such as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the *Kern County General Plan* are incorporated by reference.

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

1.10 General Provisions

1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation

Policies

- **Policy 25.** The County will promote the preservation of cultural and historic resources that provide ties with the past and constitute a heritage value to residents and visitors.

Implementation Measures

- **Implementation Measure K.** Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.
- **Implementation Measure L.** The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.
- **Implementation Measure M.** In areas of known paleontological resources, the County should address the preservation of these resources where feasible.
- **Implementation Measure N.** The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.
- **Implementation Measure O.** On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.

4.5.5 Impacts and Mitigation Measures

Methodology

As described in detail above, to evaluate the project's potential effects on significant archaeological and historic built environment resources, EM Strategies (2021) and BCR (2025) conducted cultural resources investigations of portions of the project site, which included archival research and field surveys.

The proposed project is a reclamation plan amendment that would provide for reclamation of mined lands following completion of the project proponent's ongoing vesting mining operations. However, this cultural resources analysis considers the impacts of ongoing vested mining and reclamation within the project site for purposes of disclosure and regulatory agency review.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect on cultural resources. The Kern County Environmental Checklist states that a

project would normally be considered to have a significant impact related to cultural resources if it would:

- a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5;
- b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5; or
- c. Disturb any human remains, including those interred outside of dedicated cemeteries.

According to the State CEQA *Guidelines* (14 CCR 15064.5), a project with an effect that may cause a substantial adverse change in the significance of a historical resource (or a tribal cultural resource) is a project that may have a significant effect on the environment (14 CCR 15064.5(b)). The State CEQA *Guidelines* further state that a substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historic resource would be materially impaired. Actions that would materially impair the significance of a historical resource are any actions that would demolish or adversely alter those physical characteristics of a historical resource that convey its historical significance and qualify it for inclusion in the CRHR or in a local register or survey that meet the requirements of PRC Sections 5020.1(k) and 5024.1(g).

Project Impacts

Impact 4.5-1: The proposed project would cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines Section 15064.5.

As discussed in **Section 4.5.3, *Cultural Setting***, based on the findings of the cultural resources investigations prepared for the project by EM Strategies (2021) and BCR (2025), no cultural resources eligible for listing on the CRHR and no unique archeological resources have been identified within the APE evaluated in cultural resources studies prepared for the project. Ground disturbance associated with vested mining operations and project reclamation activities would create the potential for damage or destruction of previously unidentified historical resources that could be present on the site. Undiscovered surface or subsurface resource deposits could exist, having been obscured from view during pedestrian surveys by site vegetation. Subsurface deposits could be buried, with no surface evidence. Therefore, the potential for disturbance or destruction of one or more currently unknown significant historical resources is considered potentially significant. Implementation of Mitigation Measures **MM 4.5-1** and **MM 4.5-2**, would reduce this impact to less than significant. (Mitigation Measures **MM 4.5-1** and **MM 4.5-2** provide mitigation for historical resources impacts discussed here, as well as archaeological resources impacts discussed below at **Impact 4.5-2**.)

Mitigation Measures

MM 4.5-1 At least 30 days prior to commencement of reclamation activities, the project applicant shall retain a qualified Lead Archaeologist to carry out all mitigation measures related to archaeological and historical resources.

The contact information for this Lead Archaeologist shall be provided to the Kern County Planning and Natural Resources Department. Further, the Lead Archaeologist shall be responsible for ensuring the following employee training provisions are implemented during implementation of the project:

- a. The Lead Archaeologist shall prepare Cultural Resources Sensitivity Training materials, including a Cultural Resources Sensitivity Training Guide, to be used in an orientation program given to all personnel working on the project. The training guide may be presented in video form. A copy of the proposed training materials, including the Cultural Resources Sensitivity Training Guide, shall be provided to the Planning and Natural Resources Department.
- b. The project proponent/operator shall ensure all new employees or onsite workers who have not participated in earlier Cultural Resources Sensitivity Trainings shall meet provisions specified above.
- c. The training shall include an overview of potential cultural resources that could be encountered during ground-disturbing activities to facilitate worker recognition, avoidance, and subsequent immediate notification to the Lead Archaeologist for further evaluation and action, as appropriate; and penalties for unauthorized artifact collecting or intentional disturbance of archaeological resources.
- d. A copy of the Cultural Resources Sensitivity Training Guide/Materials shall be kept onsite and available for all personnel to review and be familiar with as necessary. It is the responsibility of the Lead Archaeologist to ensure all employees receive appropriate training before commencing work onsite.

MM 4.5-2 In the event archaeological or historical resources are encountered during ground-disturbing activities, the proposed project proponent/operator shall cease any ground-disturbing activities within 100 feet of the find, and notify the Kern County Planning and Natural Resources Department. The Lead Archaeologist shall evaluate the significance of the resource(s) and recommend appropriate treatment measures. Per State CEQA Guidelines Section 15126.4(b)(3), proposed project redesign and preservation in place shall be the preferred means to avoid impacts to significant archaeological or historical resources. Consistent with State CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the Lead Archaeologist shall develop additional treatment measures in consultation with Kern County, which may include data recovery or other appropriate measures. Kern County shall consult with the project proponent and appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature; this consultation may also be conducted in advance of earth-disturbing work through a memorandum of agreement and/or an Unanticipated Discoveries Treatment Plan. Archaeological materials

recovered during any investigation shall be presented for curation at an accredited curation facility. The Lead Archaeologist shall prepare a report documenting evaluation and/or additional treatment of the resource. A copy of the report shall be provided to the Kern County Planning and Natural Resources Department and to the Southern San Joaquin Valley Information Center.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.5-1** and **MM 4.5-2**, impacts would be less than significant.

Impact 4.5-2: The project would cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5.

As discussed in **Section 4.5.3, *Cultural Setting***, based on the findings of the cultural resources investigations prepared for the project by EM Strategies (2021) and BCR (2025), no cultural resources eligible for listing on the CRHR and no unique archeological resources have been identified within the APE evaluated in cultural resources studies prepared for the project. Ground disturbance associated with vested mining operations and project reclamation activities would create the potential for damage or destruction of previously unidentified archeological resources that could be present on the site. Undiscovered surface or subsurface resource deposits could exist, having been obscured from view during pedestrian surveys by site vegetation. Subsurface deposits could be buried, with no surface evidence. Therefore, the potential for disturbance or destruction of one or more currently unknown significant archeological resources is considered potentially significant. Implementation of Mitigation Measures **MM 4.5-1** and **MM 4.5-2** would reduce this impact to less than significant. (Mitigation Measures **MM 4.5-1** and **4.5-2** provide mitigation for archaeological resources impacts discussed here, as well as historical resources impacts discussed above at **Impact 4.5-1**.)

Mitigation Measures

Implement Mitigation Measures **MM 4.5-1** and **MM 4.5-2**.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.5-1** and **MM 4.5-2**, impacts would be less than significant.

Impact 4.5-3: The proposed project would disturb human remains, including those interred outside of dedicated cemeteries.

Buried human remains could be inadvertently unearthed during excavation activities, which could result in damage to those human remains. This impact is considered potentially significant. Mitigation Measure **MM 4.5-3** contains procedures for recording and treating human remains that are discovered during implementation of the project and would reduce this impact to less than significant.

Mitigation Measures

MM 4.5-3 If human remains are uncovered during ongoing vested mining operations or reclamation activities, the project proponent/operator shall immediately halt work within 100 feet of the find, contact the Kern County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5(e) of the State CEQA Guidelines. At that time, the project proponent/operator shall contact the Kern County Planning and Natural Resources Department regarding the find. If the Kern County Coroner determines that the remains are Native American, the coroner shall contact the Native American Heritage Commission, in accordance with California Health and Safety Code Section 7050.5(c), and Public Resources Code 5097.98 (as amended by Assembly Bill 2641). The Native American Heritage Commission shall designate a Most Likely Descendent for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, and in accordance with generally accepted cultural or archeological standards or practices, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendent regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (Section 7100 et seq.) directing identification of the next-of-kin will apply.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.5-3**, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

An analysis of cumulative impacts takes into consideration the entirety of impacts that the projects discussed in **Chapter 3, Project Description**, and as shown in **Table 3-15, Cumulative Project List**, would have on cultural resources. The geographic scope for cumulative impacts to cultural resources includes all eastern Kern County (i.e. within the same Air District as the proposed project (Mojave Desert Air Basin)). Kern County records were also reviewed to determine if there were any mining/reclamation-related projects (“like projects”) within the Mojave Desert Air Basin for which application(s) were received by Kern County in the previous three years (i.e., July 16, 2021, through July 16, 2024), however, no such application(s) were received by Kern County. Analysis of cumulative impacts considers the entirety of impacts that the projects discussed in **Section 3.7, Cumulative Effects Overview**, would have on cultural resources. This geographic scope of analysis is appropriate because the archaeological and historical resources within the Mojave Desert Air Basin are expected to be similar to those in the project site because their proximity, similar environments, landforms, and hydrology would result in similar land use and, thus, site types.

Impact 4.5-4: The project would contribute to cumulative cultural resources impacts.

Cumulative development within a 6-mile radius of the project site, or other projects within eastern Kern County as discussed in the *Cumulative Setting* section above, have the potential to result in cumulative impacts to cultural resources present. As discussed previously, there are no known cultural resources of significance within the project site. Implementation of Mitigation Measures **MM 4.5-1** through **MM 4.5-3** would minimize the potential for the proposed project to result in impacts to unknown cultural resources, if discovered during project activities. Implementation of the proposed project would not result in off-site impacts to cultural resources, and it is expected that other development projects within a 6-mile radius and within eastern Kern County would be required to mitigate for their individual impacts to cultural resources. Consequently, the incremental effects of the project, after mitigation, would not have the potential to make a considerable contribution, in combination with impacts from past, present, or reasonably foreseeable projects to a cumulative significant impact on cultural resources under CEQA.

Regarding disturbance of human remains (**Impact 4.5-3**), with implementation of Mitigation Measure **MM 4.5-3**, any human remains discovered during project activities would be appropriately treated and the project would not contribute to cumulative impacts within the region.

As a result of these factors and with implementation of Mitigation Measures **MM 4.5-1** through **MM 4.5-3**, the project would not have the potential to substantially contribute to cumulative impacts associated with cultural resources.

Mitigation Measures

Implement Mitigation Measures **MM 4.5-1** through **MM 4.5-3**.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.5-1** through **MM 4.5-3**, cumulative impacts would be less than significant.

Section 4.6

Energy

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4.6.1 Introduction

This section of the Environmental Impact Report (EIR) analyzes the energy implications of the project. This section includes a summary of the project's anticipated energy needs and conservation measures. Information in this section utilizes the analysis presented in the *Energy Analysis Memorandum- CalPortland Company, Proposed Mojave Mine Reclamation Plan Amendment* (Sespe Consulting 2025d) provided in **Appendix F** of this EIR.

4.6.2 Environmental Setting

Electricity

Electricity, a consumptive utility, is a manmade resource. The production of electricity requires the consumption or conversion of energy resources—which may include water, wind, oil, gas, coal, solar, geothermal, and nuclear resources—into energy. The delivery of electricity involves several system components for distribution and use. The electricity generated is distributed through a network of transmission and distribution lines, commonly called a power grid.

Energy capacity, or electrical power, is generally measured in watts (W), while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If 10 100-W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is one million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is one billion watt-hours.

Electrical services in the project area are provided by Southern California Edison (SCE). The Mojave Cement Plant and surrounding facilities within project site boundaries are supplied with energy from both SCE, and directly from eight onsite wind turbines (the northernmost eight turbines in Section 23, Township 11 North, Range 14 West (T11N, R14W), San Bernardino Base and Meridian (SBB&M). SCE obtains its energy supplies from power plants, including hydroelectric, natural gas, wind, and solar generating plants, and delivers through high-voltage transmission lines.

Table 4.6-1, *SCE Electric Power Generation Mix (2022)*, shows the electric power generation mix for SCE electrical service in 2022 (most recently obtained) compared to the statewide power mix for 2022.

Table 4.6-1 SCE Electric Power Generation Mix (2022)

Energy Resource	2022 SCE Power Mix			2022 California Power Mix
	SCE	SCE Green Rate (50% Renewable)	SCE Green Rate (100% Renewable)	
Eligible Renewable	33.2%	66.7%	100%	35.8%
Biomass and waste	0.1%	0.0%	0%	2.1%
Geothermal	5.7%	2.9%	0%	4.7%
Eligible Hydroelectric	0.5%	0.3%	0%	1.1%
Solar	17.0%	58.6%	100.0%	17.0%
Wind	9.8%	4.9%	0.0%	10.8%
Coal	0.0%	0.0%	0.0%	2.1%
Large Hydroelectric	3.4%	1.7%	0.0%	9.2%
Natural Gas	24.7%	12.3%	0.0%	36.4%
Nuclear	8.3%	4.2%	0.0%	9.2%
Other	0.1%	0.0%	0.0%	0.1%
Unspecified Sources ¹	30.3%	15.1%	0.0%	7.1%
TOTAL²	100%	100%	100%	100%

Source: SCE 2022.

Notes:

- 1 Unspecified power is electricity that has been purchased through open market transactions and is not traceable to a specific generation source.
- 2 The figures above may not sum to 100% due to rounding.

Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs and delivered through high-pressure transmission pipelines. Natural gas provides almost one-third of the State's total energy requirements. Natural gas is measured in terms of cubic feet. In Kern County, Pacific Gas and Electric (PG&E) and Southern California Gas Company, a subsidiary of Sempra Energy, serve as the primary natural gas providers. The project site, however, currently receives its natural gas supply for the administration building and kiln from Kern River Gas Transmission.

Transportation

Transportation dominates California's energy consumption profile. California's transportation sector uses just over 40 percent of the energy consumed in the state. In 2024, Californians consumed approximately 13.4 billion gallons of gasoline and 3 billion gallons of diesel fuel (California Department of Tax and Fee Administration, 2025a and 2025b). Petroleum-based

fuels currently account for 89 percent of California’s ground transportation fuel use (CEC 2020). However, the State is now working on developing flexible strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and greenhouse gas (GHG) from the transportation sector, and reduce vehicle miles traveled (CEC 2020). The CEC predicts that the demand for gasoline will continue to decline over the next 10 years, and there will be an increase in the use of alternative fuels (CEC 2020). The California Air Resources Board’s (CARB’s) EMFAC2025 emissions inventory estimates that on-road transportation sources in Kern County will consume approximately 338 million gallons of gasoline and 183 million gallons of diesel fuel in 2025 (CARB 2025a).

4.6.3 Regulatory Setting

Federal

Corporate Average Fuel Economy Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards (NHTSA 2022). The U.S. Congress has specified that CAFE standards must be set at the “maximum feasible level” with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

June 6, 2025: Resetting the Corporate Average Fuel Economy Program

NHTSA published a final rule, Resetting the Corporate Average Fuel Economy Program. The rule identifies factors statutorily prohibited from consideration when setting maximum feasible fuel economy standards under the Energy Policy and Conservation Act of 1975, the Energy Independence and Security Act of 2007, and other applicable law. It also describes NHTSA’s authority to bring the CAFE program into compliance with relevant statutory requirements, in accordance with the President’s “Unleashing American Energy” Executive Order and the Secretary’s “Fixing the CAFE Program” Memorandum. The rule also describes NHTSA’s interpretation of its authority for a commercial medium- and heavy-duty on-highway vehicle and work truck fuel efficiency improvement program, to establish the necessary legal foundation to bring that program into compliance with law. This rule does not itself change existing CAFE or medium- and heavy-duty standards. During the rulemaking process for replacement standards, NHTSA will exercise its enforcement authority regarding all existing CAFE and medium- and heavy-duty standards in accordance with the interpretation set forth in this rulemaking.

Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act was passed to increase the production of clean renewable fuels; increase the efficiency of products, buildings, and vehicles; improve the energy performance of the federal government; and increase U.S.

energy security, develop renewable fuel production, and improve vehicle fuel economy. The act included the first increase in fuel economy standards for passenger cars since 1975, and also included a new energy grant program for use by local governments in implementing energy-efficiency initiatives, as well as a variety of green building incentives and programs.

State

Senate Bill 1389

Senate Bill (SB) 1389 (PRC Sections 25300–25323; SB 1389) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state’s electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state’s economy; and protect public health and safety (PRC Section 25301(a)). The 2023 Integrated Energy Policy Report provides the results of the CEC’s assessments of a variety of energy issues facing California including electricity resource plans, electricity and gas demand forecast, energy reliability, natural gas outlook and assessments, building decarbonization and energy efficiency, and clean transportation benefits (CEC 2024).

California Renewables Portfolio Standard

First established in 2002 under SB 1078, California’s Renewables Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33% by 2020 and 60% by 2030. In 2018, SB 100 further increased California’s RPS and required retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44% of retail sales by the end of 2024, 52% by the end of 2027, and 60% by the end of 2030, and required that the CARB should plan for 100% eligible renewable energy resources and zero-carbon resources by the end of 2045. The CPUC and the CEC jointly implement the RPS program (CPUC 2011). The CPUC’s responsibilities include: (1) determining annual procurement targets and enforcing compliance; (2) reviewing and approving each investor-owned utility’s renewable energy procurement plan; (3) reviewing contracts for RPS-eligible energy; and (4) establishing the standard terms and conditions used in contracts for eligible renewable energy. Refer to **Section 4.8, *Greenhouse Gas Emissions***, of this EIR for additional details regarding this regulation.

Assembly Bill 1493

In response to the transportation sector accounting for more than half of California’s carbon dioxide (CO₂) emissions, Assembly Bill (AB) 1493 (commonly referred to as CARB’s Pavley regulations), enacted in 2002, requires CARB to set GHG emission standards for new passenger vehicles, light-duty trucks, and other vehicles manufactured in and after 2009 whose primary use is non-commercial personal transportation. Phase I of the legislation established standards for model years 2009–2016 and Phase II established standards for model years 2017–2025 (CARB 2017a). Refer to **Section 4.8, *Greenhouse Gas Emissions***, of this EIR for additional details.

California Health and Safety Code, Division 25.5 – California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted AB 32 (codified in the California Health and Safety Code [HSC], Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. Under HSC Division 25.5, CARB has the primary responsibility for reducing the State's GHG emissions; however, AB 32 also tasked the CEC and the CPUC with providing information, analysis, and recommendations to CARB regarding strategies to reduce GHG emissions in the energy sector.

In 2016, SB 32 and its companion bill AB 197 amended HSC Division 25.5 and established a new climate pollution reduction target of 40% below 1990 levels by 2030 and include provisions to ensure that the benefits of State climate policies reach into disadvantaged communities. Refer to **Section 4.8, *Greenhouse Gas Emissions***, of this EIR for additional details regarding these regulations.

Low-Carbon Fuel Standard

The Low-Carbon Fuel Standard (LCFS), established in 2007 through Executive Order S-1-07 and administered by CARB, requires producers of petroleum-based fuels to reduce the carbon intensity of their products. Executive Order S-1-07 requires a 10 percent or greater reduction in the average fuel carbon intensity for transportation fuels in California regulated by CARB by 2010. In 2009, CARB approved the Low Carbon Fuel Standard (LCFS) regulations, which became fully effective in April 2010. The LCFS is designed to decrease the carbon intensity of California's transportation fuel pool and provide an increasing range of low-carbon and renewable alternatives, which reduce petroleum dependency and achieve air quality benefits. The regulations were subsequently readopted in September 2015 in response to related litigation. In 2018, CARB adopted an update to the regulations that requires a 20 percent reduction in the carbon intensity of transportation fuels by 2030.

California Air Resources Board

Advanced Clean Car Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012 and is closely associated with the Pavley regulations. The program requires a greater number of zero-emission vehicle models for years 2015 through 2025 to control smog, soot, and GHG emissions. This program includes the Low-Emissions Vehicle (LEV) regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and the Zero-Emissions Vehicle (ZEV) regulations to require manufactures to produce an increasing number of pure ZEVs (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles (PHEVs) between 2018 and 2025.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to diesel particulate matter emissions (Title 13 California Code of Regulations [CCR] Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered.

This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given location, with some exceptions, such as maintenance, queuing, and if required to perform work. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Regulation to Reduce Emissions of Diesel Particulate Matter, Nitrogen Oxides, and Other Criteria Pollutants from In-Use Heavy-Duty Diesel-Fueled Vehicles

In addition to limiting exhaust from idling trucks, in 2008 CARB approved the Truck and Bus regulation to reduce nitrogen oxide (NO_x), particulate matter with a diameter of 10 microns or less (PM₁₀), and particulate matter with a diameter of 2.5 microns or less (PM_{2.5}) from existing diesel vehicles operating in California (13 CCR Section 2025). The phased regulation aims to reduce emissions by requiring installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models by 2023.

CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower, such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

While the goals of these measures are primarily to reduce public health impacts from diesel emissions, compliance with the regulation has shown an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines.

California Environmental Quality Act

In accordance with the California Environmental Quality Act (CEQA), EIRs are required to include a discussion of the potential significant energy impacts of projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the State CEQA *Guidelines* provides a list of energy-related topics to be analyzed in the EIR. In addition, while not described or required as significance thresholds for determining the significance of impacts related to energy, Appendix F provides the following topics for consideration in the discussion of energy use in an EIR, to the extent the topics are applicable or relevant to the project:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project, including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.

- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

In late 2018, Appendix G of the CEQA *Guidelines* was amended to include the analysis of energy. Previously included in Appendix F, the Appendix G Checklist now provides energy criteria for the analysis of wasteful energy consumption and for conflicts with State or local energy efficiency plans. Appendix F did not describe or require significance thresholds for determining the significance of impacts related to energy. According to the updated Appendix G environmental checklist, a project would have a significant impact on energy and energy resources if it would:

- a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.6.4 Impacts and Mitigation Measures

Methodology

This analysis addresses the project's potential energy use as compared to baseline energy use and assesses the potential for the project to result in inefficient or wasteful use of energy or conflict with State or local plans for renewable energy or energy efficiency. The assessment presented herein is based on the *Energy Analysis Memorandum – CalPortland Company, Proposed Mojave Mine Reclamation Plan Amendment* (Sespe Consulting 2025d) provided in **Appendix F** of this EIR.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect related to energy and energy resources. A project could have a significant adverse effect on energy and energy resources if it would:

- a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Project Impacts

Impact 4.6-1: The project would result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

The project (reclamation of the vested site) would require the use of off-road mobile equipment (e.g., dozers, scrapers, graders, etc.) to regrade/recontour slopes, revegetate the site, and conduct other ancillary activities as described in **Chapter 3, *Project Description***. Mobile water trucks would also be utilized to apply water for dust suppression. Other smaller work trucks and personal vehicles would also transport materials and workers throughout the reclamation areas as needed. Larger heavy-duty trucks would also be used to transport dismantled/demolished equipment from the project site to the appropriate disposal facilities. Fuel energy (gasoline and diesel fuel) would be consumed within mobile equipment and vehicles operating to facilitate reclamation. As various reclamation activities are performed, energy consumption would also fluctuate during the period of reclamation. Project activities are not anticipated to require the use of natural gas or electricity.

For the purposes of assessing the project's fuel consumption compared to baseline conditions (discussed below), a representative worst-case energy consumption year is used as the basis of project energy consumption. Reclamation activities conducted under the project, are expected to be similar to the reclamation activities currently conducted at the site. Specifically, diesel and gasoline fuel would continue to be consumed as a result of on- and off-road vehicles and mobile equipment used to facilitate ongoing reclamation activities. The majority of the equipment utilized for reclamation is equipment already being utilized at the facility, or vehicles already coming on-site to transport materials and finished products. No new equipment is being proposed, and reclamation under the proposed project would involve the same types of activities and equipment use for reclamation activities that currently occur under baseline conditions.

Project reclamation activities are expected to be similar to the reclamation activities currently conducted. Specifically, energy would be consumed within mobile equipment and vehicles/trucks in order to conduct the following general reclamation activities: recontouring, stabilization, revegetation, and monitoring of final slopes and disturbed mining areas; reclamation of roads and ancillary equipment and facilities; and removal of processing facilities within the reclamation plan boundary upon the completion of surface mining operations. For purposes of this analysis, future project fuel energy consumption was conservatively estimated by quantifying maximum production year material handling fuel consumption (this maximum occurred in calendar year 2018 as described further below). Energy consumption associated with material handling operations are chosen as a proxy for the project's reclamation energy consumption because the equipment types and activity levels (e.g., bulldozing, scraping, and grading, material handling, vehicle/truck trips, etc.) include a smaller subset of energy consumed from reclamation activities alone. This estimate is conservative because it includes energy consumed from material and overburden handling associated with the underlying mineral recovery process, that goes well beyond reclamation activities themselves. As such, the representative worst-case year for which the energy consumption calculations are based, is based on the baseline year with the greatest amount of material moved on-site combined with

associated ancillary activities, which in this case was 2018. This approach of using a relatively high estimate of energy consumption for the proposed project (i.e., the worst-case) compared to the 6-year historical average (i.e., 2015-2020) baseline, results in a conservative (i.e., tending to overstate potential fuel consumption) estimate of the net change in fuel energy consumption associated with the proposed project.

To further the conservative assumptions, this analysis also defines project fuel energy consumption to include baseline fuel consumption, substituting maximum year material handling fuel consumption (the overly conservative proxy or surrogate for reclamation activities), for the 6-year average of material handling emissions used for the baseline comparison. This methodology provides a complete and comprehensive analysis, with and without the project. The difference between baseline fuel consumption and project fuel consumption is then calculated and compared to determine if the project would have a potentially significant impact.

Table 4.6-2, *Diesel Fuel Dispensing Operations (Baseline vs. Project)*, summarizes fuel dispensing quantity estimates for both the baseline and project scenarios. These fuels are used to fill on-site haul trucks and medium duty vehicles (e.g., pickup trucks). Additionally, onsite equipment fuel filling operation is and would continue to be conducted with a mobile fuel truck with a 9,000-gallon capacity as well as at a non-mobile stationary tank located onsite. Note, employee vehicles and light-duty trucks that use gasoline are generally refueled offsite at appropriate refueling stations; however, onsite refueling is and would continue via a mobile fuel truck as well as at a non-mobile stationary tank located onsite. While the quantity of diesel fuel dispensed and consumed as summarized in **Table 4.6-2** below, does not capture the complete picture of fuel energy resources consumed onsite during project reclamation (specifically the employees/vendors and certain haul trucks are assumed to fill their vehicles off-site), it provides a verifiable and comparable data point by which to estimate the facility's existing annual fuel energy consumption, as well as, a conservative estimate of future fuel consumption associated with the project. Any additional quantity of gasoline fuel consumed within project automobiles would be de minimis, and would necessarily be less than the quantity of gasoline associated with the existing baseline consumption. As shown in **Table 4.6-2** below, the project is estimated to have a net increase in fuel consumption of approximately 9 percent compared to baseline operations.

Table 4.6-2 Fuel Dispensing Operations (Baseline and Project)

Engine Type	Annual Fuel Throughput ¹			
	Baseline (Average) ²	Project (Maximum) ³	Net Change	Percent Increase
Diesel Fuel Dispensing During Reclamation Activities	3,386,344 gallons	3,706,655 gallons	+320,311 gallons	9%

Source: Sespe Consulting 2025d.

Notes:

1. Fuel throughput was calculated based on vehicle miles travelled (VMT) and fuel efficiency for each type of vehicle. Based on Facility estimates, the fuel truck makes two (2) fuel trips a day. The fuel dispensing for reclamation and mining is scaled based on the vehicle miles travel by onsite equipment/vehicles for mining and reclamation.
2. Based on historical average gallons of fuel dispensed during the 6-year baseline period (2015-2020) for reclamation activities.
3. Fuel dispensing quantity from 2018 is utilized to represent the project. 2018 was the representative worst-case year selected for this comparison, as the 2018 baseline year was when the maximum amount of material was moved throughout the facility (2,754,684 tons per year).

Because reclamation of the vested site is required under State law, by definition energy resources consumed during reclamation activities are not considered unnecessary. Additionally, the goal of the project is to enable the project proponent to continue reclamation of vested reserves across the facility, in part to efficiently manage topsoil, subsoil, and overburden while maintaining limestone feedstock quantity and quality. The project proponent has financial interest in ensuring that reclamation across the vested facility is achieved in the most efficient manner possible, which includes ensuring that fuel energy consumption is reduced to the greatest extent possible. Specifically, the use of existing onsite equipment and the sequencing of reclamation activities associated with the project components contribute to the minimization of energy use due to the minimization of material movement occurring at the same time and the optimization of onsite equipment operation. In the interest of cost efficiency and in accordance with federal and state requirements, onsite staff and contractors would not utilize fuel in a manner that is wasteful or unnecessary during reclamation.

Based on the analysis discussed above, the project as proposed is not expected to result in wasteful, inefficient, or unnecessary consumption of energy resources during project implementation; therefore, this impact would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.6-2: The project would conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Kern County has not adopted local programs or policies that support energy efficiency and/or sustainability applicable to the project. The *Kern County General Plan Energy Element* (adopted September 2009) outlines specific goals, policies and implementation measures to help guide energy development in Kern County; however, they primarily apply to energy development projects (e.g., gas/electric, solar, wind, petroleum, etc.) and are not applicable to

the proposed project reclamation of the vested mine site. Similarly, the *Cameron Canyon Specific Plan Energy Element* (adopted June 1986), Section VI. Resource, outlines specific goals, policies and implementation standards to help guide energy development; however, they primarily apply to energy development projects and are not applicable to the proposed project reclamation of the vested mine site.

The State of California's Energy Efficiency Strategic Plan (adopted 2008, updated January 2011) (CPUC 2011) outlines specific goals and strategies to help promote energy efficiency in California's industrial sector in three (3) areas: 1) support industry adoption of energy efficiency by integrating energy efficiency savings with achievement of greenhouse gas (GHG) goals; 2) build market value of and demand for energy efficiency; and 3) provide technical and public policy guidance for resource efficiency. The Energy Efficiency Strategic Plan promotes reductions in energy consumption through compliance with GHG emission reductions, water conservation, and proper waste disposal. Mobile equipment associated with project activities would comply with applicable federal, state, and regional requirements, and the project would continue to utilize the best available equipment for reclamation activities to improve diesel fuel efficiency, and equipment that uses energy would implement modern design and technology to maximize efficiency improvements to the extent practicable. Specifically, the Project would continue implementing existing rules and fleet turnover which will reduce emissions from Project sources as has occurred in the past. No control measures have been identified in California's Energy Efficiency Strategic Plan with which the project would conflict.

Additionally, because reclamation activities would not increase the number of onsite workers as compared to baseline, the project would have no effect on population growth or related potential increases in fuel consumption or other energy use associated with population growth that could conflict with a State or local plan for renewable energy or energy efficiency.

As discussed above, the project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency and this impact would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

The project's contribution to an increased need for energy is considered in the context of other past, present, and reasonably foreseeable future projects within a 6-mile radius of the proposed project site. **Section 3.7, *Cumulative Effects Overview***, of this EIR discusses cumulative projects near the project (**Table 3-15, *Cumulative Projects List***, in **Chapter 3, *Project Description***, lists specific projects considered in the cumulative impact analysis).

Significant cumulative impacts would occur if the proposed or surrounding projects identified would overburden energy facilities and/or contribute to the inefficient and negative impacts of

increased energy usage, thereby resulting in significant combined impacts related to the need for development of new facilities and increased energy production. Public agencies and utilities are given an opportunity to respond to inquiries for information regarding the potential increase in demand for their services.

Impact 4.6-3: The project would contribute to cumulative energy impacts.

The project would not utilize electricity from the power grid or natural gas and therefore is not expected to contribute to energy impacts. Further, the project would not result in the construction of permanent buildings or conflict with or obstruct a State or local plan for renewable energy or energy efficiency; therefore, cumulative impacts related to energy are considered to be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Cumulative impacts would be less than significant.

Section 4.7

Geology and Soils

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4.7.1 Introduction

This section of the Environmental Impact Report (EIR) describes the geologic and soil characteristics of the project site, potential impacts to geology and soils associated with operation of the proposed project, and mitigation measures that would reduce these impacts where applicable.

The proposed project is a reclamation plan amendment that would provide for reclamation of mined lands following completion of the project proponent's ongoing vesting mining operations. However, this geology and soils analysis considers the impacts of ongoing vested mining and reclamation within the project site for purposes of disclosure and regulatory agency review.

The analysis in this section is largely based on information from the following documents:

- *Slope Stability Assessment for Mojave Life of Mine Reclamation Plan Amendment, CalPortland Mojave Cement Plant* (Golder 2021a) included as **Appendix G.1**; and
- *CalPortland Mojave Cement Plant Site-Specific Hazard Analysis* (Golder 2021b), included as Appendix A of Golder 2021a.
- *Mojave Mine Paleontological Analysis & CEQA Implications* (Sespe Consulting 2025i) included as **Appendix G.2**.
- *Phase I Environmental Site Assessment* (Sespe 2022) included as **Appendix H**.

A description of the environmental setting (affected environment) for geology and soils is presented below in **Section 4.7.2, Environmental Setting**, including discussion of the geologic setting (soils and geologic formations, faults and seismic history) and geologic and seismic hazards (slope stability, soil hazards, faults and seismicity, strong ground shaking, fault rupture, and liquefaction). The regulatory setting applicable to geology and soils is also presented in **Section 4.7.3, Regulatory Setting**, and project impacts and associated mitigation measures are discussed in **Section 4.7.4, Impacts and Mitigation Measures**. Additional descriptions of erosion and sediment impacts on surface water (e.g., turbidity) and mitigation, as appropriate, are presented in **Section 4.10, Hydrology and Water Quality**.

Concepts and Terminology

Definitions of concepts and terminology applicable to this section are provided below.

Expansive Soils: These soils generally result from specific clay minerals that expand in volume when saturated and shrink in volume when dry. The presence of this soil type can damage structures when expansion and contraction of soil cracks rigid building materials (e.g., concrete, wood, drywall, etc.).

Faults: Faults are fractures in the crust of the earth along which land on one side has moved relative to land on the other side. Most faults are the result of repeated displacements over a long period of time. A fault trace is the line on the earth's surface defining the fault. Faults are classified as active, potentially active, and inactive based on criteria developed by the California Geological Survey (CGS), formerly known as the California Division of Mines and Geology [CDMG]. By definition, an active fault is one that has experienced surface displacement within the Holocene period (within the last 11,000 years), a potentially active fault is one that has experienced displacement within the Quaternary period (during the last 1.6 million years), and inactive faults are those that have not experienced movement in the last 1.6 million years.

Ground Shaking: The central and southern California regions are characterized by, and have a history of, faults and associated seismic activity. Earthquakes are classified by their magnitude, a measure of the amount of energy released during an event.

Landslides and Rockfalls: These events are large movements of land downhill. They can be induced by seismic events (earthquakes) or wet, saturated soil conditions and can cause significant damage to life and property. Landslides are defined as the movement of rock, debris, or earth masses down a slope. Landslides are a form of "mass wasting," which refers to any downslope movement of soil and rock under the direct influence of gravity. Landslide events include rock falls, topples, slides, spreads, and debris flows. Causes of landslides include rainfall, earthquakes, volcanic activity, groundwater changes, and alteration of a slope by manmade construction activities.

Liquefaction: This occurs when saturated, loose materials (e.g., sand, silty sand) are weakened and transformed from a solid to a near-liquid state due to increased pore water pressure. The increase in pressure is caused by strong ground motion from an earthquake.

Paleontological Resources: The prehistoric remains or traces of once living organisms preserved in soils and sedimentary rock formations. Paleontological resources contribute to the understanding of past environments, environmental change, and the evolution of life.

Quaternary Age: The most recent of the three periods of the Cenozoic Era in the geologic time scale of the International Commission on Stratigraphy (ICS). It follows the Tertiary Period, spanning 2.588 ± 0.005 million years ago to the present. The Quaternary includes two geologic epochs: the Pleistocene and the Holocene Epochs.

Seismic Hazards: Seismicity is the geographic and historical distribution of earthquakes, including their frequency, intensity, and distribution. Seismic hazards include surface rupture, ground shaking, liquefaction, landslides, subsidence, expansive soils, and soils and soil erosion.

Subsidence: Land subsidence is the gradual, local setting or shrinking of the earth's surface with little or no horizontal motion. Subsidence is normally the result of gas, oil, or water extraction, hydro compaction, or peat oxidation and not the result of landslide or ground failure.

Surface Rupture: This occurs when movement on a fault deep within the earth breaks through to the surface. Fault ruptures almost always follow pre-existing faults that are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking. Fault creep is the slow rupture of the earth's crust.

Unique Paleontological Resource: This term is defined as any fossil or assemblage of fossils, or paleontological resource site or information containing fossils that meets any of the following criteria: 1) is the best example of its kind locally or regionally, 2) illustrates a paleontological or evolutionary principle (e.g., faunal succession; plant or animal relationships), 3) provides a critical piece of palaeobiological data (illustrates a key portion of geologic history or provides evolutionary, paleoclimatic, paleoecologically, paleoenvironmental, or biochronologically data), 4) encompasses any part of a "type locality" of a fossil or formation, 5) contains a unique or particularly unusual assemblage of fossils, 6) occupies a unique position stratigraphically within a formation, 7) occupies a unique position, proximally, distally or laterally within a formation's extent or distribution.

4.7.2 Environmental Setting

Regional Setting

The project site is within the western portion of the Mojave Desert block between the Garlock fault, which is located about 1.2 mile northwest of the cement plant and approximately 0.7 mile northwest of the northwest corner of the project site near the Tehachapi Willow Springs Road/Oak Creek Road intersection, and the San Andreas fault, which is located about 23 miles southwest of the cement plant and approximately 19 miles to the southwest of the project site. The project site lies on the northeastern end of a shutter ridge (a tectonic feature) that is about 10 miles long by 3 miles wide and that was created by left-lateral movement along the Garlock fault within the Tehachapi Range. The region surrounding the site is characterized by exposures of bedrock comprising largely Mesozoic granitic plutonic rocks that intruded older Paleozoic metamorphic rocks. Later stages of bedrock development included emplacement of Miocene shallow intrusions into the older, solidified plutons (Dibblee 1967; Dibblee and Louke 1970). This suite of rocks has been offset more than 40 miles by the Garlock fault in a left-lateral sense beginning in the mid- to late Miocene (Andrew et al. 2014) (Golder 2021a).

The western section of the Garlock fault (closest to the site) has a relatively straight trace with a northeast-southwest strike, while the central and eastern sections have a clockwise curvature such that the eastern section strikes east-west to slightly east-southeast. This apparent curvature has been interpreted by Andrew et al. (2014) as bending to accommodate the prominent dextral shear within the Mojave Desert and Eastern California shear zone to the north of the Garlock fault. (Golder 2021a) The fault is estimated to have a maximum left-lateral displacement of between 30 and 40 mi (48 and 64 km) (Davis and Burchfiel 1973; Carr et al. 1993; Bryant 2000). McGill and Sieh (1991) divided it into three contiguous sections comprising the western, central, and eastern Garlock sections (Golder 2021a). The project site is situated adjacent (approximately 0.7 mile at its nearest point) to the western Garlock section that is about 68 mi (110 km) long and has experienced repeated ground surface rupture throughout the Holocene Epoch (i.e., last 11,700 years) (Bryant 2000, Madden and Dolan 2008) (Golder 2021b).

Figure 4.7-1, *Regional Fault Map*, shows the locations of the Garlock Fault (west segment), the San Andreas Fault (Mojave section) and other faults in the region, as well as historical earthquake epicenters in the region and their relationship to the project site and planned mine pits and stockpile locations.

Site Geology

Information on the site's general geologic conditions is based on Golder (2021a) originating mostly from Dibblee (1963) and the geologic map of the Tehachapi Quadrangle by Dibblee and Louke (1970) (Golder 2021a).

The plutonic crystalline rocks of pre-Tertiary age at the site are igneous and metamorphic rocks that together form the local crystalline basement. Metamorphic rocks occur as isolated former roof pendants within the granitic rocks. For example, the Bean Canyon formation exposed in the southern foothills of the Tehachapi Mountains describes isolated roof pendants elongated northeast and sub-parallel to the Tehachapi mountain front. The Bean Canyon formation is reportedly 5,000 ft thick, as indicated in the largest measured roof pendant. The Bean Canyon formation consists of marble, schist, and minor hornfelsic rocks. The plutonic rocks are likely Mesozoic to Cretaceous in age, ranging in composition from hornblende diorite to granite, but are predominantly of quartz monzonite composition. Dibblee (1963) notes that the schist unit is generally not a schist in the strict sense but approaches phyllite or even argillite in character. The schist is fine-grained and characterized by faint to conspicuous bedding expressed by color changes and platy cleavage or foliation parallel to bedding (Golder 2021a).

The marble units of the Bean Canyon formation are limestone recrystallized to marble with locally dolomite compositions. The marble occurs as strata of varying thickness up to approximately 1,200 ft but generally considerably thinner. Thin layers of lime-silicate hornfels are associated with the marble near the intrusive contacts. Crystalline grain sizes range from 1 millimeter (mm) to more than 5 mm and are frequently intercalated as fine- and coarse-grained marble. The marble is particularly coarse near granitic contacts. Contacts between the roof pendant metamorphic rocks and the quartz monzonite are generally sharp. Contacts are commonly steeply dipping under the pendants. The quartz monzonite is a medium- to coarse-grained granitic rock composed of approximately equal percentages of quartz, potassium feldspar, and plagioclase with accessory biotite and hornblende (Golder 2021a).

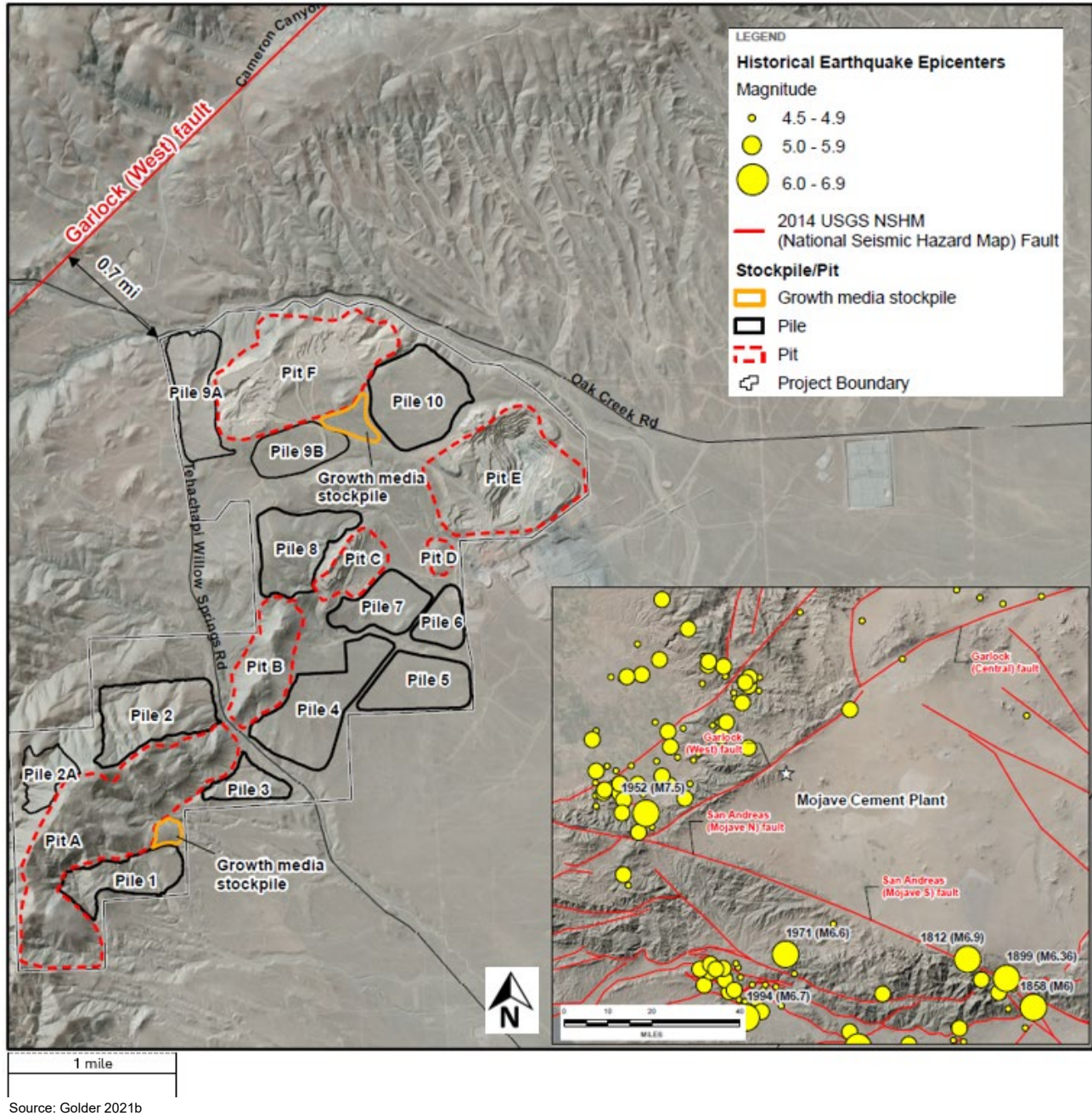


Figure 4.7-1
Fault Map

The structural grain consists of moderately to steeply dipping, northeast-trending outcrops of the metamorphic pendants. At the existing Main Pit (within the planned Pit E area), marble occurs in the nose of an anticline with the schist in the core. The existing Northwest and Northeast Pits (the proposed Pit F area) separate northeast-striking pendants with the bedding and foliation dipping northwest. The future planned pits enlarge the existing pits and will extend to the southwest extension of the limestone/marble pendant exposed at the Main Pit. A generalized geologic map prepared by CPC (2016) includes several mapped faults in the existing Main Pit (Golder 2021a).

Seismic Hazards

The morphology of the Mojave Desert in which the project site is located is controlled by two dominant fault trends: northwest-trending right-lateral strike-slip faults subparallel to the San Andreas fault zone that marks the western province boundary; and east-west trending left-lateral, strike-slip faults associated with the Garlock fault zone (northern province boundary). The eastern extent of the Garlock fault zone forms the boundary with the Sierra Nevada and Basin and Range provinces to the north, while the San Andreas fault forms the boundary with the Transverse Ranges province to the west (CGS 2002) (Golder 2021b).

The Garlock fault is an east-west striking, left-lateral strike-slip fault that extends for more than 160 miles from its intersection with the San Andreas fault in the west to the southern end of Death Valley in the east. The fault is estimated to have a maximum left-lateral displacement of between 30 and 40 miles (Davis and Burchfiel 1973; Carr et al. 1993; Bryant 2000). McGill and Sieh (1991) divided it into three contiguous sections comprising the western, central, and eastern Garlock sections (USGS 2006). The project site is situated adjacent to the western Garlock section that is about 68 miles long and has experienced repeated ground surface rupture throughout the Holocene Epoch (i.e., last 11,700 years) (Bryant 2000, Madden and Dolan 2008) (Golder 2021b).

Paleoseismic data suggests that the western Garlock fault has historically ruptured as a single section and in combination with the central section generating earthquakes close to the project site. The most recent rupture event close to the site was at A.D. 1450-1640. Accordingly, any estimate of the likely maximum magnitude of a Garlock fault rupture should consider multi-section ruptures in addition to only the western section. The 475-year return period (RP) peak ground acceleration (PGA) ranges from 0.28 g to 0.36 g to indicate a relatively moderate to high level of earthquake ground shaking hazard at the site. Seismic sources used for the probabilistic analysis are those from the 2014 USGS National Seismic Hazard Model (NSHM). Deterministic analysis shows that the median PGA for a scenario Magnitude 7.7 earthquake located on the western Garlock fault approximately 0.7 miles from the northwest edge of the project site ranges from 0.42 g to 0.49 g. Because of the proximity of the site to the active Garlock fault and about 50 percent higher median deterministic values, stability analyses may also consider likely stability under a scenario with co-seismic rupture of the Garlock fault (Golder 2021b).

Liquefaction

The planned locations of mine pits associated with vested mining operations lack significant soil cover and are underlain by mostly lithified bedrock materials (i.e., limestone/marble, granitics, and shale); therefore, the bedrock units that underlie and surround the planned mine pits are not considered to be susceptible to liquefaction (Golder 2021a).

Eight of the proposed overburden stockpiles (Piles 1, 2, 2A, 3, 8, 9A, 9B, and 10) are in hillside areas that are underlain by shallow bedrock. Hence, the native materials underlying the proposed locations of these stockpiles are not considered to be susceptible to liquefaction. The remaining four proposed stockpiles (Piles 4 through 7) are wholly or partially located along the eastern/southeastern portion of the project area where the thickness of alluvium within the footprints of these stockpiles may be in excess of 50 feet. The alluvium underlying the locations of Piles 4 through 7 is mapped as older alluvium by both CPC (2016) and Dibblee and Louke (1970). The older alluvium at the site is generally dense to very dense based on previous geotechnical explorations at the site and Golder's (2021a) limited observations in the four test pits excavated for the Golder 2021 studies. In addition, the depth to groundwater at the proposed locations of Piles 4 through 7 is expected to be at least 50 feet below ground surface. Hence, the older alluvium that underlies the proposed locations of Piles 4 through 7 is not considered to be susceptible to liquefaction (Golder 2021a).

Seismically Induced Landslides and Rockfalls

According to the *Kern County General Plan*, the areas of Kern County with slopes subject to failure are predominantly found along the river terraces, bluffs, and foothills. The project site is located on gently to steeply sloping topography.

Subsidence

Subsidence is occurring within the San Joaquin Valley and has been identified in portions of northern and western Kern County, northwest of the intersection of State Route (SR-) 99 and SR-166, and in the vicinity of the City of Visalia. There are four types of subsidence occurring in the county: tectonic subsidence, subsidence from extraction of oil and gas, subsidence from groundwater withdrawal, and subsidence caused by hydro-compaction of moisture-deficient alluvial deposits. The *Kern County General Plan* has indicated that, although subsidence is not a significant hazard, damage to wells, foundations, and underground utilities may occur.

Due to the petroleum and groundwater withdrawal activities throughout Kern County, subsistence has the potential to occur; however, the limited amount of petroleum withdrawal occurring in Kern County is not expected to be sufficient to result in serious subsidence. The California Department of Conservation Geologic Energy Management Division (CalGEM) monitors subsidence in oil and gas fields and regulates oil and gas withdrawal and pressurizing activities on the field. If subsidence is noted, remediation is accomplished by raising the water table by injecting water or reducing the volume of groundwater being pumped. The project site is not located in an area of significant petroleum extraction activities and no petroleum extraction occurs on the site, nor is it located in an area of known subsidence (USGS, 2025).

Dam Failure

No substantial dams or surface water impoundments are located near the project site. The nearest impoundments are Big Piute Lake, which is composed of a series of ponds on the southwest side of the Rosamond Lake dry lake bed approximately 18 miles southeast of the project site; Brite Lake, located approximately 10 miles to the northwest of the site; Lake Palmdale, located approximately 33 miles southeast of the project site; Little Rock Reservoir, located approximately 41 miles southeast of the site; and Lake Isabella, located approximately 42 miles north of the site.

Failure of any of the dams or berms creating these impoundments would not have the potential to inundate the project site.

Flooding

The majority of the project site is located within the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Zone X, which indicates an area of minimal flood hazard (Map Number 06029C3675E; FEMA 2008). A small portion of the southeasternmost project site (approximately 8 acres) encroaches into the 100-year floodplain as currently mapped on FEMA FIRM Panel 06029C3275E (effective September 26, 2008) (Sespe Consulting 2025g).

Soils

Based on the NRCS USDA Web Soil Survey reviewed by ELMT (2025), the project site is underlain by the following soil units: Jawbone gravelly loamy sand (15 to 75 percent slopes), Cajon loamy sand (0 to 5 percent slopes), Cajon gravelly loamy sand (0 to 9 percent slopes), Cinco gravelly loam sand (50 to 75 percent slopes), Garlock loamy sand (2 to 9 percent slopes), Hi Vista sandy loam (2 to 9 percent slopes), Pajuela-Whitewolf association (steep), Quarries, Randsburg sandy loam (2 to 15 percent slopes), Torriorthents-Rock outcrop complex (very steep), and Wasioja sandy loam (5 to 9 percent slopes, cool) (ELMT 2025b). Soil types located within the project site and surrounding areas are shown on **Figure 4.7-2, Soils Map**.

Groundwater

Groundwater data used by Golder (2021a) are from Kenneth D. Schmidt and Associates (KDSA 2009) and the USGS Water Resource mapping tool (USGS 2016). KDSA (2009) describes a network of groundwater monitoring wells constructed between 1982 and 1993. Well depths range from 88 to 300 ft below the ground surface. These wells are in the vicinity of the existing plant facilities and may not be representative of groundwater levels for most of the project area. At the time the KDSA report was prepared in 2009, groundwater elevations measured near the plant ranged from 3,212 to 3,520 ft amsl. KDSA (2009) states that groundwater generally flows to the southeast on the westerly side of the plant and to the east on the easterly side of the plant. The groundwater table east of the plant is recharged by streamflow from Oak Creek, while inflow to hard rock recharges groundwater west of the plant (KDSA 2009). KDSA (2009) presents a groundwater elevation map, but this map only covers portions of Sections 13, 19, 24, and 30 (i.e., those areas close to the existing cement plant) (Golder 2021a).

According to the USGS Water Resource mapping tool, there are two USGS wells east of the project area, with the most recent readings taken in April 2020. One well is approximately one-half mile east of the existing Main Pit; the groundwater level in this well has been reported at an elevation of approximately 3,250 ft amsl. The second well is about two miles east of proposed Pile 5 and has a reported groundwater level that is at an elevation of approximately 2,960 ft amsl. The project proponent currently operates a dewatering well located in the Main Pit. Project proponent personnel indicated that the groundwater level in this well was located at an elevation of approximately 3,400 ft amsl (Golder 2021a).

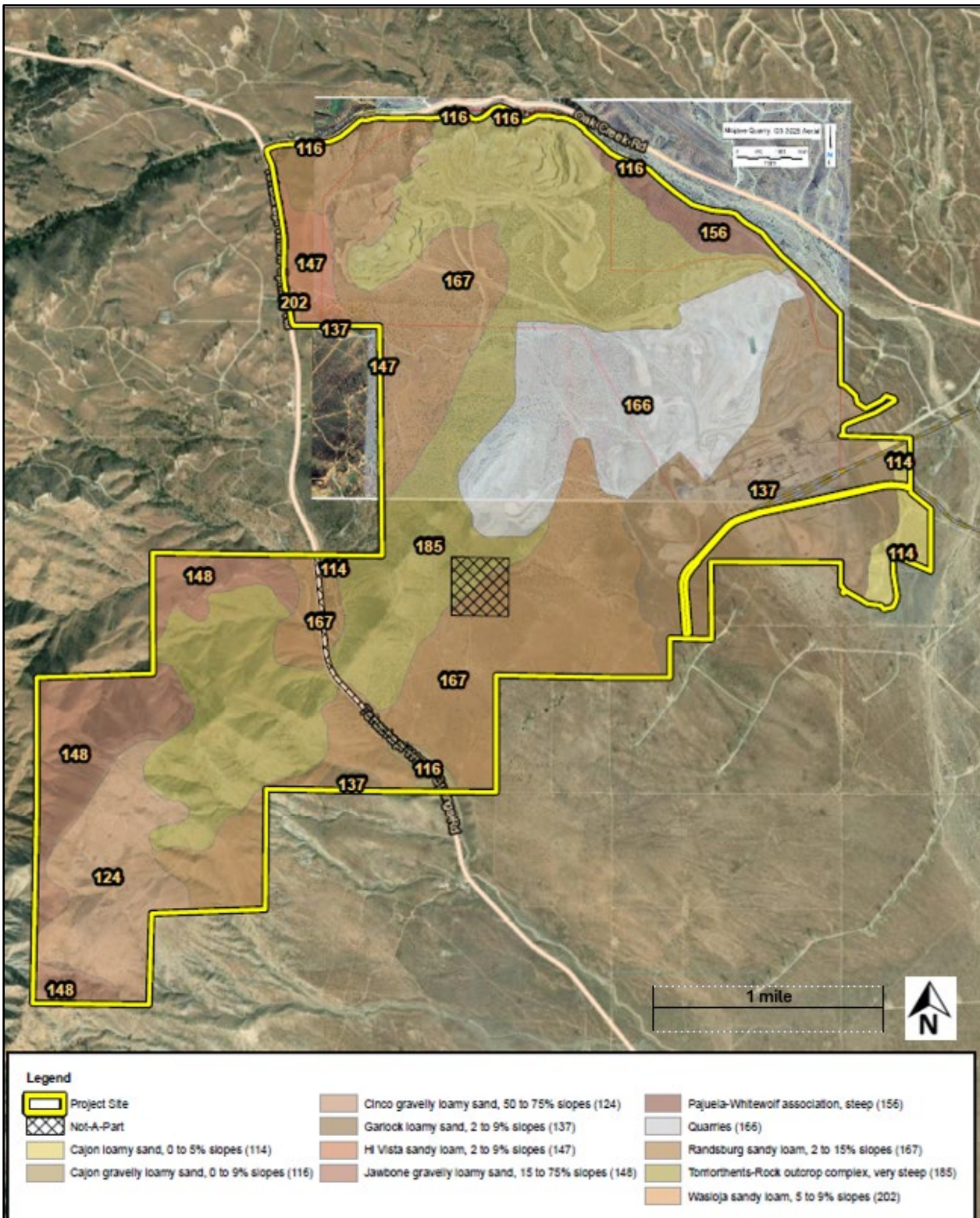


Figure 4.7-2
Soils Map

Golder (2021a) observed seepage entering the floor of the existing Main Pit at an elevation of roughly 3,400 ft amsl, or approximately 400 ft below the natural ground surface (bgs). Golder did not observe any springs, groundwater seeps (other than that aforementioned), vegetation changes, or other signs of near-surface groundwater in the project area. The planned mine pits are expected to have overall depths up to 1,550 ft or more and groundwater is expected to be encountered by multiple planned pits during operations. Based on the current understanding of groundwater conditions at the site, Golder considers that the proposed pits may extend to about 1,000 ft below the static groundwater table during operations at some locations on the site (Golder 2021a).

Paleontological Setting

According to the site description contained in Golder (2021a), the project area that will encompass the stockpiling areas and the design quarrying limits are characterized by the following geologic units:

1. Limestone and schist;
2. Quartz monzonite;
3. Felsite intrusive dikes; and
4. Alluvium.

Of these lithologies, only the limestone and the alluvium could be considered to represent taphonomic potential for paleontological resources, based on the Society of Vertebrate Paleontology (SVP) 2010 guidance (Sespe Consulting 2025i). In the case of the limestone, which is the target resource for CalPortland's Mojave Cement Plant, mapping by Dibblee and Louke (1970) identifies this unit as part of an undifferentiated metasedimentary rock assemblage. The limestone is specifically described as limestone marble. Alteration of the limestone is attributed to metamorphic processes associated with emplacement of igneous rocks, as evidenced by the presence of the younger monzonite and felsic intrusives. Marbleization is described as a textural attribute of the limestone, which is indicative of moderate- to high-grade transformative processes involving heat and pressure that lead to structural recrystallization of the parent carbonate. As such, while the metasedimentary limestone constitutes a sedimentary protolith type, it is not expected to preserve prehistoric remains or traces of organisms, as it is well documented that metamorphic processes most always destroy fossil material (Bernard et al, 2007, 2010) (Sespe Consulting 2025i). Additionally, over the life of the vested quarry operations, no paleontological resources have been uncovered or identified.

4.7.3 Regulatory Setting

Federal

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1997 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this,

the act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by NEHRP, which refined the description of agency responsibilities, program goals, and objectives.

NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates FEMA as the Lead Agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards such as those to which the proposed project would be required to adhere.

Clean Water Act

The Clean Water Act (CWA) (United States Code [USC] Title 33, Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires States to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). The facility currently has NPDES coverage under the Industrial General Permit (General Industrial Permit), Order No. 2014-0057-DWQ, NPDES General Permit No. CAS000001. The General Industrial Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which includes best management practices (BMPs) to protect stormwater runoff, including measures to prevent soil erosion. Requirements of the Federal CWA and associated SWPPP requirements are described in further detail in **Section 4.10, *Hydrology and Water Quality***.

Antiquities Act of 1906

The Antiquities Act of 1906 (16 USC 431–433) states, in part:

That any person who shall appropriate, excavate, injure or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States, without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated, shall upon conviction, be fined in a sum of not more than five hundred dollars or be imprisoned for a period of not more than ninety days, or shall suffer both fine and imprisonment, in the discretion of the court.

Although there is no specific mention of natural or paleontological resources in the act itself, or in the act's uniform rules and regulations (Code of Federal Regulations [CFR] Title 43, Part 3), the term "objects of antiquity" has been interpreted to include fossils by the National Park Service (NPS), the U.S. Bureau of Land Management (BLM), the U.S. Forest Service (USFS), and other Federal agencies. Permits to collect fossils on lands administered by Federal agencies

are authorized under this act. However, due to the large gray areas left open to interpretation due to the imprecision of the wording, agencies are hesitant to interpret this act as governing paleontological resources.

Federal Land Policy and Management Act of 1976

The Federal Land Policy and Management Act (FLPMA) of 1976 (43 USC. 1712[c], 1732[b]; sec. 2, Federal Land Management and Policy Act of 1962 [30 USC 611]; Subpart 3631.0 et seq., *Federal Register* Vol. 47, No. 159, 1982) does not refer specifically to fossils. However, “significant fossils” are understood and recognized in policy as scientific resources. Permits, which authorize the collection of significant fossils for scientific purposes, are issued under the authority of FLPMA. Under FLPMA, Federal agencies are charged to:

- Manage public lands in a manner that protects the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, archaeological, and water resources, and, where appropriate, preserve and protect certain public lands in their natural condition (Section 102[a][8][11]);
- Periodically inventory public lands so that the data can be used to make informed land-use decisions (Section 102[a][2]); and
- Regulate the use and development of public lands and resources through easements, licenses, and permits (Section 302[b]).

State

Alquist-Priolo Earthquake Fault Zoning Act of 1972

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (formerly the Special Studies Zoning Act), regulates development and construction of buildings intended for human occupancy to avoid hazards associated with surface fault rupture. In accordance with this law, the CGS maps active faults and designates Earthquake Fault Zones along mapped faults. This act groups faults into categories (i.e., active, potentially active, or inactive). Historic and Holocene faults are considered active, Late Quaternary and Quaternary faults are considered potentially active, and pre-Quaternary faults are considered inactive. These classifications are qualified by conditions. For example, a fault must be shown to be “sufficiently active” and “well defined” through detailed site-specific geologic explorations to determine whether building setbacks should be established. Any project that involves the construction of buildings or structures for human occupancy, such as an operations and maintenance building, is subject to review under the Alquist-Priolo Earthquake Fault Zoning Act, and any structures for human occupancy must be located at least 50 feet from any active fault. The project site is not located within an Alquist-Priolo Fault Zone, nor is the project proposing the construction of any new structures meant for human occupancy. The nearest Alquist Priolo Fault Zone to the project site is the Garlock Fault zone located approximately 0.7 miles northwest of the project site.

Seismic Hazards Mapping Act of 1990

In accordance with Public Resources Code (PRC) Chapter 7.8, Division 2, the CGS is directed to delineate seismic hazard zones. The purpose of the Seismic Hazards Mapping Act of 1990 is to reduce the threat to public health and safety and minimize the loss of life and property by identifying and mitigating seismic hazards, such as those associated with strong ground

shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. State agencies, Counties, and Cities are directed to use seismic hazard zone maps developed by the CGS in their land use planning and permitting processes. In accordance with the act, site-specific geotechnical investigations must be performed prior to permitting most urban development projects within seismic hazard zones.

California Building Code

The California Building Code (CBC) has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The 2019 CBC is based on the 2012 International Building Code (IBC) published by the International Code Conference. In addition, the CBC contains necessary California amendments, which are based on reference standards obtained from various technical committees and organizations such as the American Society of Civil Engineers (ASCE), American Institute of Steel Construction (AISC), and American Concrete Institute (ACI). ASCE Minimum Design Standards 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients which are used to determine a Seismic Design Category (SDC) for a project as described in Chapter 16 of the CBC. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC in accordance with CBC Chapter 16. Chapter 16, Section 1613 provides earthquake loading specifications for every structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, which shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7-16. Chapter 18, Section 1804 provides requirements for excavation, grading, and fills, whereas Section 1806 provides specifications for load bearing soils. Chapter 18 also describes analysis of expansive soils (1803.5.3) and the determination of the depth to groundwater table. For Seismic Design Categories D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses mitigation measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any

combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific PGA magnitudes and source characteristics consistent with the design earthquake ground motions.

Local

The proposed project would be subject to policies and regulations contained within the *Kern County General Plan*, *Cameron Canyon Specific Plan*, the Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies pertaining to the avoidance of geologic hazards and/or the protection of unique geologic features, as well as policies for the preservation of paleontological resources.

Kern County General Plan

The policies, goals, and implementation measures in the *Kern County General Plan* that pertain to geology and soils and are applicable to the proposed project are provided below. The *Kern County General Plan* contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the proposed project. These measures are not listed below, but as stated in **Chapter 2, Introduction**, all policies, goals, and implementation measures in the *Kern County General Plan* are incorporated by reference.

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

1.3 Physical and Environmental Constraints

Goals

- **Goal 1.** To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.

Policies

- **Policy 1.** Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained (Map Code 2.1 [Seismic Hazard], Map Code 2.2 [Landslide], Map Code 2.3 [Shallow Groundwater], Map Code 2.5 [Flood Hazard], Map Codes from 2.6 – 2.9, Map Code 2.10 [Nearby Waste Facility], and Map Code 2.11 [Burn Dump Hazard]) to support such development unless appropriate studies establish that such development will not result in unmitigated significant impact.
- **Policy 6.** Regardless of percentage of slope, development on hillsides will be sited in the least obtrusive fashion, thereby, minimizing the extent of topographic alteration required and reducing soil erosion while maintaining soil stability.
- **Policy 7.** Ensure effective slope stability, wastewater drainage, and sewage treatments in areas with steep slopes are adequate for development.

1.9 Resource

Goals

- **Goal 1.** To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations which will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources, or diminish the other amenities which exist in the County.
- **Goal 2.** Protect areas of important mineral, petroleum, and agricultural resource potential for future use.
- **Goal 3.** Ensure the development of resources areas minimize effects on neighboring resource lands.

Policies

- **Policy 2.** In areas with a resource designation on the General Plan map, only industrial activities which directly and obviously relate to the exploration, production, and transportation of the particular resource will be considered to be consistent with this General Plan.
- **Policy 14.** Emphasize conservation and development of identified mineral deposits.

Implementation Measures

- **Implementation Measure H.** Use the California Geological Survey's latest maps to locate mineral deposits until the regional and statewide importance mineral deposits map has been completed, as required by the Surface Mining and Reclamation Act.
- **Implementation Measure K.** Protect oilfields and mineral extraction areas through the use of appropriate implementing zone districts: A (Exclusive Agriculture), DI (Drilling Island), NR (Natural Resource), or PE (Petroleum Extraction).

Chapter 4. Safety Element

4.1 Introduction

Goals

- **Goal 1.** Minimize injuries and loss of life and reduce property damage.
- **Goal 2.** Reduce economic and social disruption resulting from earthquakes, fire, flooding, and other geologic hazards by assuring the continuity of vital emergency public services and functions.
- **Goal 3.** Assist in the allocation of public resources in Kern County to develop information regarding geologic, fire, and flood safety hazards and to develop a systematic approach toward the protection of public health, safety, and welfare from such hazards.
- **Goal 4.** Create an awareness of the residents in Kern County through the dissemination of information about geologic, fire, and flood safety hazards.

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

Policies

- **Policy 1.** That the County's program of identification, mapping, and evaluating the geologic, fire, flood safety hazard areas, and significant concentrations of hydrogen sulfide in oilfield areas, presently under way by various County departments, be continued.
- **Policy 2.** Those hazardous areas, identified as unsuitable for human occupancy, are guided toward open space uses, such as agriculture, wildlife habitat, and limited recreation.

Implementation Measures

- **Implementation Measure A.** All hazards (geologic, fire, and flood) should be considered whenever a Planning Commission or Board of Supervisors action could involve the establishment of a land use activity susceptible to such hazards.
- **Implementation Measure C.** Require detailed site studies for ground shaking characteristics, liquefaction potential, dam failure inundation, flooding potential, and fault rupture potential as background to the design process for critical facilities under County discretionary approval.
- **Implementation Measure F.** The adopted Kern County, California Multi-Hazard Mitigation Plan is incorporated by reference. This multi-jurisdictional plan, approved in compliance with the Disaster Mitigation Act of 2000, provides long-term planning to reduce the impacts of future disasters.

4.3 Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure

Policies

- **Policy 1.** The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.

Implementation Measures

- **Implementation Measure B.** Require geological and soils engineering investigations in identified significant geologic hazard areas in accordance with the Kern County Code of Building Regulations.
- **Implementation Measure C.** The fault zones designated in the Kern County Seismic Hazard Atlas should be considered significant geologic hazard areas. Proper precautions should be instituted to reduce seismic hazard, whenever possible, in accordance with State and County regulations.
- **Implementation Measure D.** Detailed geologic investigations shall be conducted in conformance with guidelines of the California Geological Survey for all discretionary permits and construction designed for human occupancy in an Alquist-Priolo Earthquake Fault Zone.

4.5 Landslides, Subsidence, Seiche, and Liquefaction

Policies

- **Policy 1.** Determine the liquefaction potential at sites in areas of shallow groundwater (Map Code 2.3) prior to discretionary development and determine specific mitigation to be incorporated into the foundation design, as necessary, to prevent or reduce damage from liquefaction in an earthquake.
- **Policy 2.** Route major lifeline installations around potential areas of liquefaction or otherwise protect them against significant damage from liquefaction in an earthquake.
- **Policy 3.** Reduce potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.

Implementation Measures

- **Implementation Measure B.** Require liquefaction investigations in all areas of high groundwater potential and appropriate foundation design to mitigate potential damage to buildings on sites with liquefaction potential.
- **Implementation Measure C.** Develop and maintain maps, at an appropriate scale, showing the location of all geologic hazards, including active faults, Alquist-Priolo Earthquake Fault Zones, 100-year flood hazard boundary, the extent of projected dam failure inundation and time arcs, depth of inundation, land subsidence, slope failure and earthquake-induced landslides, high groundwater, and liquefaction potential.
- **Implementation Measure D.** Discretionary actions will be required to address and mitigate impacts from inundation, land subsidence, landslides, high groundwater areas, liquefaction and seismic events through the CEQA process.

Cameron Canyon Specific Plan

The *Cameron Canyon Specific Plan Seismic Safety and Safety Element* addresses seismic, flood, fire, and geologic hazards as they affect the plan area. Its purpose is to reduce the risk of death, injury, and property damage resulting from these public health hazards.

Section X. Seismic Safety and Safety Element

Goals

- **Goal 1.** To reduce the potential for loss of life, injury, and property damage resulting from natural disasters and environmental factors by limiting and regulating in areas of known hazards.
- **Goal 2.** To reduce economic and social disruption resulting from earthquakes, fire, flooding, and other geologic hazards by assuring the continuity of vital services and functions.
- **Goal 3.** To assist in the allocation of public resources in Kern County to develop information regarding geologic, fire, and flood safety hazards and to develop a systematic approach toward the protection of public health, safety, and welfare from such hazards.

- **Goal 4.** To create an awareness of the people of Kern County through the dissemination of information about geologic, fire, and flood safety hazards.
- **Goal 5.** To provide for various land uses in accordance with the capability of the land to safely accommodate such uses.

Policies

- **Policy 1.** Constrained areas will be guided toward open space uses, such as rangeland and watershed use.
- **Policy 2.** Areas of potential natural hazard will be identified on the plan by applicable constraint overlays.
- **Policy 4.** Development will also be guided by the policies of Section I of this plan that relates to physical constraints.

Implementation Measures

- **Implementation Measure 3.** The “Implementation Recommendations” of the Kern County Safety and Seismic Safety Element are hereby incorporated by reference as requirements.
- **Implementation Measure 4.** A soil study shall be required of all proposed development within the Specific Plan area. Said study shall be prepared by as soils engineer and completed prior to the issuance of construction or grading permits. Development shall employ necessary measures to mitigate soil limitations prior to final occupancy or release of the permit.
- **Implementation Measure 5.** Development shall be subject to the implementation standards of the Physical Constraints section of Section I of this plan.

Kern County Ordinance

Title 17 – Buildings and Construction

All construction in Kern County is required to conform to the Kern County Building Code (Chapter 17.08, Building Code, of the Kern County Code of Regulations). Kern County has adopted the CBC, 2010 Edition, with some modifications and amendments. The entire County is in Seismic Zone 4, a designation previously used in the Uniform Building Code (UBC) to denote the areas of highest risk to earthquake ground motion. California has established an Unreinforced Masonry program that details seismic safety requirements for Zone 4. Seismic provisions associated with Seismic Zone 4 have been adopted.

Title 19 – Zoning Ordinance

Chapter 19.100 – Surface Mining Operations

The purpose of Chapter 19.100 of the Kern County Zoning Ordinance is to regulate surface mining operations consistent with the requirements of the California Mining and Reclamation Act (PRC Sections 2710 et seq.) and the State Policy for Surface Mining and Reclamation Practice (California Administrative Code Title 14, Sections 3500 et seq.).

Section 19.100.040 – Development Standards and Conditions

Section 19.100.040 sets development standards and conditions for surface mining operations. These include the following:

- B.1. The designed steepness and proposed treatment of the mined lands' final slope shall take into consideration the physical properties of the slope material, its probable maximum water content, landscaping requirements and other factors. In all cases, the reclamation plan shall specify the critical gradient needed to maintain slope stability and shall specify slope angles flatter than the critical gradient for the type of material involved. Whenever final slopes approach the critical gradient for the type of material involved, an engineering analysis of the slope stability shall be performed and submitted as part of the reclamation plan.
- B.3. The removal of vegetation and overburden, if any, in advance of surface mining shall be kept to the minimum.
- B.4. Stockpiles of overburden and minerals shall be managed to minimize water and wind erosion.
- B.9. Grading and revegetation shall be designed to minimize erosion and to convey surface runoff to natural drainage courses or interior basins designed for water storage. Basins that will store water during periods of surface runoff shall be designed to prevent erosion of spillways when these basins have outlet to lower ground.

4.7.4 Impacts and Mitigation Measures

This section describes the methodology used in conducting the California Environmental Quality Act (CEQA) impact analysis for geology and soils, the thresholds of significance used in assessing impacts to geology and soils, and the assessment of impacts to geology and soils, including relevant mitigation measures.

Methodology

The analysis in this section considered potential impacts associated with geology and soils issues identified in the *Kern County Environmental Checklist* (updated May 2019). Methodologies for specific geotechnical evaluations, including slope stability, are summarized in the respective impact discussions below, and are presented in detail in referenced studies, including *Slope Stability Assessment for Mojave Life of Mine Reclamation Plan Amendment, CalPortland Mojave Cement Plant* (Golder 2021a) included as **Appendix G.1** to this EIR, *CalPortland Mojave Cement Plant Site-Specific Hazard Analysis* (Golder 2021b) included as Appendix A of Golder 2021a, and the *Mojave Mine Paleontological Analysis & CEQA Implications* (Sespe 2025i) memorandum included as **Appendix G.2** to this EIR.

The proposed project is a reclamation plan amendment that would provide for reclamation of mined lands following completion of the project proponent's ongoing vesting mining operations. However, this geology and soils analysis considers the impacts of ongoing vested

mining and reclamation within the project site for purposes of disclosure and regulatory agency review.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect on geology and soils. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to geology and soils if it would:

- a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42);
 - ii. Strong seismic groundshaking;
 - iii. Seismic-related ground failure, including liquefaction; or,
 - iv. Landslides;
- b. Result in substantial soil erosion or loss of topsoil;
- c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property;
- e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater; or
- f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Project Impacts

Impact 4.7-1: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo earthquake fault zoning map issued by the State geologist for the area or based on other substantial evidence of a known fault.

The project site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone where site-specific studies addressing the potential for surface fault rupture are required. As described in **Section 4.7.2, *Environmental Setting***, the project site is situated near the Garlock Fault which is approximately 1.2 miles from the cement plant and 0.7 mile northwest of the project site at its nearest location. The San Andreas Fault is approximately 23 miles southwest of the cement plant and approximately 19 miles southwest of the project site (Golder 2021a).

The project proponent maintains approximately 21 employees and typically has 16 employees within the vested quarry at a time. The facility is staffed 24 hours a day, seven (7) days a week (Sespe Consulting 2023). The proposed project (i.e., reclamation of the project site) would not result in any change to the facility's vested operations or throughput, or an increase in production above historical vested levels, and would not result in any changes to the number of employees at the site associated with existing and future vested mining and processing operations. Project reclamation would result in up to an additional 27 employees at the project site each day to conduct onsite reclamation for a period of approximately two years (Sespe 2025e). Given the absence of any known active faults in the project area, and that no additional employees would work at the site as a result of the project, the potential to expose people to substantial adverse effects involving rupture of a known earthquake fault is considered low during both ongoing vested mining operations and during/following project reclamation activities. Furthermore, there would be no onsite residents and the project does not propose the construction of any new buildings within the project site. As such, impacts related to fault rupture would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.7-2: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving strong seismic ground shaking.

As described in **Section 4.7.2, *Environmental Setting***, the project site is situated near the Garlock Fault which is approximately 1.2 miles from the cement plant and 0.7 mile northwest of the project site at its nearest location. The San Andreas Fault is approximately 23 miles southwest of the cement plant and approximately 19 miles southwest of the project site (Golder

2021a). These fault systems that are capable of generating ground motions that could affect the project area and could affect the stability of mine pit and stockpile slopes within the project site.

The proposed reclamation plan provides a detailed discussion of the anticipated mining and proposed reclamation for the site. Figures in Chapter 3 of this EIR illustrate proposed final reclaimed conditions (see **Figure 3-7, Proposed Maximum Extent of Excavation**, **Figure 3-8, Proposed Final Reclaimed Conditions**, **Figure 3-9, Proposed Reclamation Cross-Sections (A-F)**, **Figure 3-10, Proposed Reclamation Cross-Sections (G-K)**, and **Figure 3-11, Proposed Reclamation Cross-Sections (L-O)**). The anticipated approximate depth of mining (feet below ground surface [bgs]) and anticipated depth of excavation pits upon final reclamation (feet below ground surface) are presented in **Table 4.7-1, Anticipated Approximate Depth of Mining and Anticipated Depth of Excavation Pits Upon Final Reclamation**.

Table 4.7-1 Anticipated Approximate Depth of Mining and Anticipated Depth of Excavation Pits Upon Final Reclamation (feet below ground surface [bgs])

Anticipated Depth of Mining (feet bgs) ¹	Pit A: ~1,223 feet Pit B: ~1,090 feet Pit C: ~530 feet Pit D: ~310 feet Pit E: ~1,465 feet Pit F: ~1,433 feet
Anticipated Depth of Excavation Pits Upon Final Reclamation (feet bgs) ²	Pit A: ~1,223 feet Pit B: ~1,090 feet Pit C: ~530 feet Pit D: ~310 feet Pit E: <~100 feet Pit F: <~100 feet

Notes:

1. Please see Figures 1-14 as contained in the Reclamation Plan Amendment (Appendix B) for additional depth details and actual proposed final elevations for the maximum excavation of each pit and the final proposed elevations after reclamation.

Mine pits would be excavated utilizing conventional open pit methods and would involve drilling and blasting benches. Final pit slope design is informed with slope stability analysis prepared for the mine plan and considers achievable bench designs, inter-ramp slopes, and overall slopes. The analysis identified maximum slope angles for various overall pit slope heights to achieve the target factor of safety (FOS) at the cessation of mining (i.e., closure conditions). Maximum slope angles are specific to each pit based on the results of the site-specific seismic hazard analysis. Slope design requirements for Pits A, B, C, and D are based on the highest PGA for the cumulative area. Pits E and F are planned to be backfilled to near surface grade during mining operations, therefore, slope stability analysis for final slopes of these pits is not applicable to final reclaimed conditions.

Golder (2021a) performed a sensitivity analysis on a generic slope to evaluate maximum slope angles for various slope heights. For the analysis, the variable slope was assumed to be homogeneous granite and a disturbance factor was applied to the material up to 15 feet behind the slope. For each slope height evaluated, the overall slope angle was incrementally adjusted until target static and pseudostatic factors of safety were obtained. The sensitivity analysis was

performed for the seismic coefficient representing the PGA expected for the proposed pit areas in the southern limestone body (0.22). The results of the sensitivity analysis assuming a seismic coefficient of 0.22 are presented in **Table 4.7-2, Sensitivity Analysis Results Applicable to Pits A through D**. Final mine pit slopes are anticipated to be consistent with slope angles as analyzed by Golder (2021a) as necessary to achieve factors of safety at or in excess of 1.5 static and 1.1 pseudo-static.

Table 4.7-2 Sensitivity Analysis Results Applicable to Pits A through D

Slope Height	Maximum Slope Angle	Factor of Safety (static)	Factor of Safety (seismic)
1,500 – 1,675 feet	37.5°	1.56	1.10
1,400 – 1,500 feet	39°	1.56	1.11
1,300 – 1,400 feet	40°	1.56	1.11
1,200 – 1,300 feet	41.5°	1.54	1.10
1,100 – 1,200 feet	42.5°	1.54	1.11
1,000 – 1,100 feet	44°	1.53	1.10
0 – 1,000 feet	45°	1.54	1.11

Source: Golder 2021a, Table 9.

The anticipated maximum height of permanent stockpiles (feet above ground surface and elevation above mean sea level [amsl]) are as shown in **Table 4.7-3, Anticipated Maximum Height of Permanent Stockpiles**.

Table 4.7-3 Anticipated Maximum Height of Permanent Stockpiles

Permanent Stockpile	Anticipated maximum height of permanent stockpile (feet above ground surface)	Anticipated maximum height of permanent stockpile elevation (feet above mean sea level [amsl])
Pile 1	450	4,790
Pile 2A	500	5,200
Pile 2B*	830	4,950
Pile 3	370	4,200
Pile 4	570	4,350
Pile 5	440	4,000
Pile 6	290	3,900
Pile 7	400	4,100
Pile 8	500	4,550

Table 4.7-3 Anticipated Maximum Height of Permanent Stockpiles

Permanent Stockpile	Anticipated maximum height of permanent stockpile (feet above ground surface)	Anticipated maximum height of permanent stockpile elevation (feet above mean sea level [amsll])
Pile 9A	450	4,500
Pile 9B	420	4,500
Pile 10	730	4,600

Source: Golder 2021a, pages 4-5.

Notes :

* This Pile was labeled as Pile 2 in the Slope Stability Assessment (Golder 2021a)

As shown in **Table 4.7-4, Summary of Stockpile Slope Stability Analysis Results**. The twelve permanent stockpiles are planned to have overall slope inclinations of 1.75H:1V (29.7 degrees). Slope stability analysis of the stockpiles determined that proposed final overburden stockpile fill slopes would achieve factors of safety at, or in excess of, 1.7 under static conditions and 1.1 under pseudo-static conditions with overall slopes no steeper than 1.75H:1V, overall heights of 830 feet or less, and with tops of stockpiles near horizontal and with a minimum 50-foot offset between the toe of slope and crest of any adjacent pit.

Table 4.7-4 Summary of Stockpile Slope Stability Analysis Results

Stockpile No.	Factor of Safety (static)	Factor of Safety (pseudostatic)
Pile 1	1.8	1.2
Pile 2*	1.8	1.1
Pile 3	1.9	1.2
Pile 4	1.7	1.1
Pile 5	1.8	1.2
Pile 6	1.8	1.2
Pile 7	1.7	1.1
Pile 8	1.8	1.1
Pile 9A*	1.7	1.1
Pile 10	1.7	1.1

Source: Golder 2021a, Table 3.

*The slope stability analyses were only conducted for the stockpiles labeled as Pile 2 and Pile 9A in Golder 2021a, as these would be the tallest of the stockpiles within these given storage areas. Specifically, Pile 2 would reach a maximum height of approximately 830 feet (compared to 500 feet for Pile 2A), and Pile 9A would reach a maximum height of approximately 450 feet (compared to 420 feet for Pile 9B). Because Golder's slope stability found the taller stockpiles would have an acceptable FOS, it's presumed the smaller stockpiles would also be stable under static and pseudo-static conditions.

Based on the results of the global stability analyses performed for final stockpile slopes, the proposed final overburden stockpile fill slopes would meet the stability criteria of this study with an overall slope no steeper than 1.75H:1V and an overall height of 830 ft or less. Golder (2021a) recommends that the final stockpiles associated with the proposed reclamation plan amendment have slope inclinations no steeper than 1.75H:1V (i.e., approximately 30 degrees)

and be placed to a maximum height of 830 ft. These conclusions assume the tops of the overburden stockpiles are near horizontal and that a minimum 50-ft offset is maintained between the toe of a stockpile and the crest of an adjacent pit. Golder (2021a) also recommends that the design of the final overburden stockpiles account for erosion. As part of reclamation activities at the site, the proposed stockpiles will be revegetated as this is a general SMARA requirement. In addition to access roads, benches are recommended for the final stockpile slopes every 50 vertical feet to control erosion on the slope faces and allow for the efficient collection and management of stormwater on the stockpiles. Golder (2021a) also notes that installing adequate stormwater controls on the stockpiles will be of paramount importance in order to control erosion, especially given the very tall nature of the proposed stockpiles (i.e., heights of up to approximately 830 ft) and recommends that proper temporary and permanent erosion and sediment controls should be installed to minimize erosion rates from the overburden stockpiles.

All excavation onsite would adhere to the specifications, procedures, and site conditions contained in the approved reclamation plan, which would be fully compliant with the seismic recommendations by the California-licensed professional geotechnical engineer. A copy of the approved reclamation plan shall be on file with the Kern County Planning and Natural Resources Department (PLNR). Any substantial deviation from the approved reclamation plan would require review by PLNR. Adherence to the approved reclamation plan would ensure that seismic hazards would be less than significant. Nonetheless, the County has decided to include compliance with the reclamation plan as a mitigation measure.

Mitigation Measures

MM 4.7-1 In accordance with the approved reclamation plan, maximum slopes and depths for the project shall be as follows:

- a) Maximum final reclaimed slopes for mine pits A, B, C and D shall be as provided in the approved reclamation plan. Mine pits E and F shall be backfilled as shown on the approved reclamation plan.
- b) Maximum overall final reclaimed slopes for the twelve permanent material stockpiles (SP 1, SP 2A, SP 2B, SP 3, SP 4, SP 5, SP 6, SP 7, SP 8, SP 9A, SP 9B, SP 10) shall be 1.75:1 (horizontal:vertical (h:v)).
- c) Maximum depth of excavation of the quarry shall be the maximum excavation depths identified in the approved reclamation plan.
- d) Maximum height of the twelve permanent stockpiles shall be the maximum stockpile heights identified in the approved reclamation plan. Increased slopes and/or depths may be approved in accordance with the provisions of the Surface Mining and Reclamation Act (SMARA) of 1975 and Section 19.100 of the Kern County Zoning Ordinance.

Level of Significance after Mitigation

Implementation of Mitigation Measure **MM 4.7-1** would ensure that impacts remain less than significant.

Impact 4.7-3: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving seismic-related ground failure, including liquefaction.

Seismically induced liquefaction occurs when loose, water-saturated sediments of relatively low density are subjected to cyclic shaking that causes soils to lose strength or stiffness because of increased pore water pressure. Liquefaction generally occurs when the depth to groundwater is less than 50 feet.

The proposed locations of the pits lack significant soil cover and are underlain by mostly lithified bedrock materials (i.e., limestone/marble, granitics, and shale). Therefore, the bedrock units that underlie and surround the proposed pits are not considered to be susceptible to liquefaction. Eight of the proposed overburden stockpiles (Piles 1, 2B, 2A, 3, 8, 9A, 9B, and 10) are in hillside areas that are underlain by shallow bedrock. Hence, the native materials underlying the proposed locations of these stockpiles are not considered to be susceptible to liquefaction (Golder 2021a).

The other four proposed stockpiles (Piles 4 through 7) are wholly or partially located along the eastern/southeastern portion of the project area where the thickness of alluvium within the footprints of these stockpiles may be in excess of 50 feet. The alluvium underlying the locations of Piles 4 through 7 is mapped as older alluvium by both CPC (2016) and Dibblee and Louke (1970). The older alluvium at the site is generally dense to very dense based on previous geotechnical explorations at the site and Golder's limited observations in the four test pits excavated for the Golder (2021a) study. In addition, the depth to groundwater at the planned locations of Piles 4 through 7 is expected to be at least 50 feet bgs. Hence, the older alluvium that underlies the proposed locations of Piles 4 through 7 is not considered to be susceptible to liquefaction (Golder 2021a).

Additionally, proposed backfilling at Pits E and F would also not present a risk due to liquefaction. As stated above, the proposed pit locations are underlain by mostly lithified bedrock materials (i.e., limestone/marble, granitics, and shale), which are well-drained and stable geologic materials not considered to be susceptible to liquefaction. Additionally, backfilling would occur well above the groundwater table. Due to the geology and groundwater tables underlying Pits E and F, backfilling in these areas would also not present a risk for liquefaction.

For these reasons, the project's potential to directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving seismic-related ground failure, including liquefaction, is considered less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.7-4: The project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving landslides.

As discussed at **Impact 4.7-2**, above, mine pit slopes and stockpiles that would be developed during vested mining and that would remain following reclamation would be designed in accordance with slope stability analysis and recommendations and would adhere to the requirements of Mitigation Measure **MM 4.7-1**. Thus, reclaimed mine pit slopes and stockpile slopes are expected to be sufficiently stable to achieve an acceptable factor of safety with implementation of Mitigation Measure **MM 4.7-1**. Therefore, this impact is considered less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measure **MM 4.7-1**.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.7-1**, impacts would be less than significant.

Impact 4.7-5: The project would result in substantial soil erosion or the loss of topsoil.

Surface disturbance and material placement activities associated with ongoing vested mining and project reclamation would have the potential to cause increased runoff, erosion, and sedimentation that would not otherwise occur at the project site. During ongoing mining operations throughout the life of the mine, storm water controls and best management practices (BMPs) will be implemented as described in the site-specific Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will specify BMPs to ensure erosion and sediment controls are implemented on site (Sespe 2025g).

Mine pit and stockpile slope stability design and specifications are discussed in detail at **Impact 4.7-2**, above. Specifications for slopes and revegetation pursuant to the project's proposed reclamation and revegetation plan would serve to minimize the potential for erosion and topsoil loss and implementation would be ensured through Mitigation Measure **MM 4.7-1**. Additionally, Mitigation Measure **MM 4.10-1** (see EIR **Section 4.10, Hydrology and Water Quality**), requires submittal of a SWPPP, if required, to the Regional Water Quality Control Board—Lahontan Region (RWQCB) designed to minimize runoff and specifying BMPs to prevent all pollutants from contacting stormwater, with the intent of keeping sedimentation or any other pollutants from moving off-site and into receiving waters. Pursuant to Mitigation Measure **MM 4.10-1**, BMPs may include implementing erosion and sediment controls. Mitigation Measure **MM 4.10-1** also specifies that, should a SWPPP not be required by the RWQCB, documentation stating such shall be presented to the Kern County Planning and Natural Resources Department. Additionally, the project would be subject to Kern County ordinances and standards related to soils, geology, and mining activities.

For the reasons discussed above, the erosion of engineered slopes on the project site resulting from the proposed project would be less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measures **MM 4.7-1** and **MM 4.10-1**.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.7-1** and **MM 4.10-1**, impacts would be less than significant.

Impact 4.7-6: The project would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

As discussed under **Impact 4.7-2**, slope stability analysis for the project (Golder 2021a) concludes that the project's proposed final reclaimed slopes would achieve a suitable factor of safety with ongoing assessment and verification or adjustments as may be needed to address localized geologic conditions. To reduce the potential of exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving unstable soil, Mitigation Measure **MM 4.7-1** would ensure that slopes and mining depths are consistent with the proposed reclamation plan, SMARA, and the Kern County Zoning Ordinance. Therefore, potential impacts would be less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measure **MM 4.7-1**.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.7-1**, impacts would be less than significant.

Impact 4.7-7: The project would be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (1994), creating substantial risks to life or property.

Expansive soils are fine-grained soils (generally high plasticity clays) that can undergo a significant increase in volume with an increase in water content and a significant decrease in volume with a decrease in water content. Changes in the water content of a highly expansive soil can result in severe distress to structures constructed on or against the soil. The project site does not contain expansive soils that would preclude the construction of the proposed improvements. Furthermore, the implementation of Kern County Building Code requirements, as applicable, would further minimize the potential impact of expansive soils. Therefore, impacts related to expansive soils would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.7-8: The project would have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

The existing project site is not serviced by a wastewater treatment provider and proposes no changes. The existing operation currently utilizes a combination of plumbed restroom facilities with septic system(s), and portable toilets and handwashing or sanitization facilities for employee use. The same or similar facilities would continue to be used for ongoing vested mining and during reclamation, and no additional septic systems are proposed. Therefore, no impact would occur.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

No impact would occur.

Impact 4.7-9: The project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Based on the designs presented for the project, while the mining and processing activities are fully vested, and therefore not within the scope of the CEQA, to assure a complete understanding of the physical setting as it pertains to potential paleontological resources, the extent to which the proposed vested mining would disturb geologic units beyond the limestone resource was assessed (Sespe 2025i). Comparing the proposed site design with the geologic units mapped by Dibblee and Louke (1970), there would be no new surface disturbance in the Quaternary alluvium. Only Pit C and Pit E appear to have designed upper bench limits extending beyond the hardrock units into unconsolidated alluvium. However, in each of these two instances, the existing footprints already have impacted the alluvial materials. Rather, future mining in those areas would be focused on accessing deeper limestone resources. For the other individual pits, the planned future mining is contained within the metasedimentary and igneous rock bodies.

Given the pit footprints, as described above the project is not designed in a manner that would significantly alter the Quaternary sedimentary deposits. Even if harvesting of the limestone resource were to remove or disturb incidental alluvial basin fill, because of the paleo-depositional characteristics of this unit, the potential for preservation is low. Here, the alluvium is characteristic of a proximal fan facies. Specifically, mapping by Menges and Cossette (2023) of the Owlshhead Mountains, Inyo and San Bernardino Counties, California map the alluvium in the basin as Quaternary older alluvial fan deposits (Qoa). In contrast to other types of Quaternary depositional settings, such as floodplains or certain fluvial environments, which can present favorable necrobiotic and biostratinomic conditions for burial and early permineralization of vertebrate remains, alluvial fans and in particular their proximal positions typically form under relatively high-energy, discontinuous and variable deposition, which in contrast does not readily facilitate preservation. Although rapid burial is possible in alluvial fan systems, the constant process of erosion, avulsion and reworking of sediment comprising fan

complexes, particularly in areas of active tectonism, (Bull & McFadden, 2020; Miall, 1996) would substantially discount the benefits of early encapsulation and effectively destroy skeletal material and most all other hard parts. Even if fragmental remains were preserved, significant physical degradation can be expected. Thus, from a taphonomic perspective, such processes are highly unlikely to advance the biostratigraphic processes that would facilitate preservation of significant paleontological resources.

To further evaluate the preservation potential associated with the Quaternary alluvium deposits in the project area, a review of the Paleobiology Database was conducted. Based on this review, no recorded fossil localities were identified in the project area or surroundings. The nearest localities are reportedly near the Tehachapi area and are associated with much older (Eocene) stratigraphic units. Corroborating this finding is the background provided by CalPortland, which affirmed that no fossil discovery has been reported by the company over the course of the mining operations to date.

Due to the low potential occurrence of significant vertebrate fossils in the q deposits within the project site, ground-disturbing and excavation activities within these areas of the site are considered to have a low potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; therefore, this impact is considered less than significant. Implementation of Mitigation Measures **MM 4.7-2** and **MM 4.7-3** would ensure potential impacts remain less than significant.

Mitigation Measures

MM 4.7-2 At least 30 days prior to commencement of reclamation activities, the project proponent shall retain a qualified Paleontologist, defined as a Paleontologist meeting the Society for Vertebrate Paleontology's Professional Standards (Society for Vertebrate Paleontology 2010). The qualified Paleontologist and the Lead Archaeologist may be the same individual.

MM 4.7-3 If a paleontological resource is found, the project proponent/operator shall cease ground-disturbing activities within 50 feet of the find. The qualified paleontologist shall evaluate the significance of the resource(s) and recommend appropriate treatment measures. At each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples shall be collected and submitted for analysis. Any fossils encountered and recovered shall be catalogued and presented for donation to a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.7-2** and **MM 4.7-3**, impacts would remain less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

Section 3.7, *Cumulative Effects Overview*, of this EIR discusses cumulative projects near the project. (**Table 3-15, *Cumulative Projects List***, in **Chapter 3, *Project Description***, lists specific projects considered in the cumulative impact analysis.) The geographic scope for considering cumulative impacts with regard to geology and soils includes the extent of the project site, because impacts to geology and soils are generally site-specific. Impacts of the project would be cumulatively considerable if they would have the potential to combine with similar impacts of other past, present, or reasonably foreseeable projects.

Impact 4.7-10: The project would contribute to cumulative geology and soil resource impacts.

As discussed above, all areas of Kern County are considered seismically active, to a less or greater extent depending on their proximity to active regional faults. Cumulative projects shown in **Table 3-15, *Cumulative Projects List***, would also be subject to similar seismic hazards since they are in the project vicinity. However, the effects of these projects are not of a nature to cause cumulatively significant effects from geologic impacts, or on soils, because such impacts are site-specific and would only have the potential to combine with impacts of the proposed project if they occurred in the same location.

Impacts related to erosion and sediment deposition can be cumulative in nature if affecting a watershed. Cumulative impacts to water quality are addressed in **Section 4.10, *Hydrology and Water Quality***, of this EIR. Buildout of approved and planned uses in Kern County has the potential to result in erosion and the loss of topsoil; however, individual projects are required to comply with applicable codes, standards, and permitting requirements (i.e., preparation of a SWPPP or approval of a Notice of Non-Applicability [NONA]) to mitigate erosion impacts. Impacts associated with erosion are mitigated on a project-by-project basis, which would reduce the overall cumulative impact to a less-than-significant level. Implementation of mitigation measures outlined in this section would further reduce the potential impacts associated with geology and soils resulting from the proposed project; therefore, cumulative geological and soil-related impacts are not considered cumulatively considerable.

Mitigation Measures

Implement Mitigation Measures **MM 4.7-1, MM 4.7-2, MM 4.7-3** and **MM 4.10-1**.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.7-1, MM 4.7-2, MM 4.7-3** and **MM 4.10-1**, cumulative impacts would remain less than significant.

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Section 4.8

Greenhouse Gas Emissions

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Section 4.8

Greenhouse Gas Emissions

4.8.1 Introduction

This section of the Environmental Impact Report (EIR) describes the affected environment and regulatory setting for greenhouse gas (GHG) emissions. It also describes the GHG emission impacts that would result from implementation of the project along with mitigation measures that would reduce these impacts. Information in this section is based in part on the following document:

- *Air Quality and Greenhouse Gas Assessment Mojave Life of Mine Reclamation Plan Amendment* (Trinity Consultants 2025), included as **Appendix C**.

4.8.2 Environmental Setting

GHGs and climate change are a cumulative global issue. The California Air Resources Board (CARB) and U.S. Environmental Protection Agency (USEPA) regulate GHG and require reporting on emissions within the State of California and the United States, respectively. While the CARB has the primary regulatory responsibility within California for GHG emissions, local agencies can also adopt policies for GHG emission reduction. CARB has divided California into regional air basins. The project is in the portion of unincorporated Kern County within the Mojave Desert Air Basin (MDAB), and under the jurisdiction of the Eastern Kern Air Pollution Control District (EKAPCD).

Climate Change

In the early 1960s, scientists recognized that carbon dioxide (CO₂) levels in the atmosphere were rising every year. It was also noted that several other gases, including methane (CH₄) and nitrous oxides (N₂O) were also increasing. Levels of these gases have increased by about 40% since large-scale industrialization began around 150 years ago, according to the USEPA. After numerous computer-simulated model runs on the effects of these increases in the atmosphere, it was concluded that the rising concentrations almost always resulted in an increase in average global temperature. Rising temperatures may, in turn, produce changes in weather, sea levels and land use patterns, commonly referred to as “climate change.” There is general scientific consensus that climate change is occurring, and that human activity contributes in some measure (perhaps substantially) to that change. Manmade emissions of GHGs, if not sufficiently curtailed, are likely to contribute further to continued increases in global temperatures. Increases in global temperatures will cause a reduction in the polar ice caps and an increase in sea level, which will result in flooding in low-lying areas of the world. Additionally, climate change will shift rainfall patterns, which will cause significant impacts to agriculture and freshwater availability worldwide.

Both natural processes and human activities emit GHGs. The accumulation of GHGs in the atmosphere regulates the earth’s temperature; however, emissions from human activities such

as electricity production and the use of motor vehicles have elevated the concentration of GHGs in the atmosphere. This accumulation of GHGs has contributed to an increase in the average temperature of the earth's atmosphere and has contributed to global climate change. Of the principal GHGs (i.e., CO₂, CH₄, N₂O, sulfur hexafluoride [SF₆], perfluorocarbons [PFCs], and hydrofluorocarbons [HFCs]), CO₂ is the most common reference gas for climate change. Using the Global Warming Potential (GWP) measurement, GHG emissions are often quantified and reported as CO₂ equivalent (CO₂e). Large emission sources are reported in million metric tons of CO₂e (MMTCO₂e).

As the concentrations of GHGs continue to increase in the atmosphere, the Earth's surface temperature is also increasing, exceeding past levels. The Earth's average surface temperature has increased by about 0.17 degrees Fahrenheit (°F) per decade since 1901. Worldwide, 2016 was the warmest year on record, 2020 was the second warmest, and 2012–2021 was the warmest decade on record since thermometer-based observations began (USEPA 2022a). Climate models predict that the average surface temperature of the Earth could increase by 0.5 to 8.6°F by the end of this century if GHGs continue to increase (USEPA 2017).

Climate change affects people, plants, and animals. Scientists are certain that increasing the concentration of GHGs will change the planet's climate; however, they are not sure by how much it will change, at what rate it will change, or what the exact effects will be. They are working to better understand future climate change and how the effects will vary by region and over time.

Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (Intergovernmental Panel on Climate Change [IPCC] 2001):

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and feedback mechanisms involved are not fully understood, and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

Some of the potential resulting effects in California of global warming may include loss in snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. A summary of some of these potential effects that could be experienced in California as a result of climate change is provided below:

Sea Level Rise. Since 1870 the global sea level has risen about 8 inches. The rising sea level increases the likelihood and risk of flooding. Future sea level rise will vary for different reasons but is expected to rise at a greater rate than during the past 50 years. Regional factors, such as land elevation changes that occur due to subsidence or uplifting, will influence the relative sea level rise for the coastlines around the world. However, global sea level rise of 1 to 4 feet could occur by 2100 (USEPA 2017).

Air Quality. Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State.

Water Supply. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10% during the last century. During the same period, sea level rose 8 inches along the California coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many southern California cities have experienced their lowest recorded annual precipitation twice within the past decade in a span of only 2 years.

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra Nevada snowpack provides the majority of California's water supply by accumulating snow during our wet winters and releasing it slowly when we need it during our dry springs and summers. The snowpack is expected to experience a 25% to 40% reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (California Department of Water Resources [DWR] 2008).

Hydrology. As discussed previously, climate change could potentially affect the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for saltwater intrusion. Sea level rise may be a product of climate change through two main processes: expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply

due to saltwater intrusion. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture. California has a \$30 billion agricultural industry and has the highest crop value in the Nation serving as an important source of the Nation's food supply. Changes in temperature and water availability, compounded by annual and seasonal shifts and extremes, will affect both crop yield and quality. Indirect impacts such as decreases of pollinators and increases in pests and diseases will also have a negative effect on agricultural yield.

Ecosystems and Wildlife. Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increases in drought, wildfire, invasive species, and pests as well as geographic ranges will threaten native ecosystems in the southwest. Over 3,000 native California species of plants are expected to face reductions in geographic ranges in which they can survive. Climate change and other stressors will hinder the species' ability to migrate or adapt. These stressors include human expansion, air and water pollution, invasive species, streamflow reductions, and the region's mountainous terrain (DWR 2008).

Greenhouse Gas Emissions

GHGs refer to gases that absorb and re-emit infrared radiation in the atmosphere. Many chemical compounds found in Earth's atmosphere act as GHGs, which allow sunlight to enter the atmosphere freely. When sunlight strikes Earth's surface, some of it is reflected back toward space as infrared radiation (heat). GHGs absorb this infrared radiation and trap the heat in the atmosphere. Over time, the amount of energy sent from the sun to Earth's surface should be about the same as the amount of energy radiated back into space, leaving the temperature of Earth's surface roughly constant. Many gases exhibit these "greenhouse" properties. Some of them occur in nature (e.g., water vapor, CO₂, CH₄, N₂O), while others are exclusively manmade (e.g., gases used for aerosols). The principal GHGs—CO₂, CH₄, N₂O, SF₆, PFCs, and HFCs—are listed below (USEPA 2022b).

- **Carbon dioxide:** CO₂ enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and chemical reactions (e.g., the manufacture of cement). CO₂ is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
- **Methane:** CH₄ is emitted during the production and transport of coal, natural gas, and oil. CH₄ emissions also result from livestock and agricultural practices and the decay of organic waste in municipal solid waste landfills.
- **Nitrous oxide:** N₂O is emitted during agricultural and industrial activities and during combustion of fossil fuels and solid waste.
- **Sulfur hexafluoride:** SF₆ is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity, including equipment such as electrical circuit breakers, which may be used for the project. SF₆ is a potential source of fugitive emissions from

electrical transmission and distribution equipment. Fugitive emissions are unintentional leaks of GHGs from equipment such as joints, seals, and gaskets.

- **Fluorinated gases:** SF₆, HFCs, and PFCs are synthetic, powerful climate-change gases emitted from a variety of industrial processes. Fluorinated gases are often used as substitutes for ozone-depleting substances (i.e., chlorofluorocarbons [CFCs], hydrochlorofluorocarbons, and halons). These gases are typically emitted in minute quantities, but because they are potent climate-change gases, they are sometimes referred to as high GWP gases.

In most cases, GHGs have both natural and anthropogenic (human-caused) sources. Natural mechanisms already exist as part of the “carbon cycle” for removing GHGs from the atmosphere (often called land or ocean sinks). Because of the increase in anthropogenic sources, levels of GHGs have exceeded the normal rates of natural absorption. This has resulted in increased atmospheric concentrations of GHGs and potentially human-induced climate change.

GHG emissions in the United States come mostly from energy use. These are driven largely by economic growth, fuel used for electricity generation, and weather patterns affecting heating and cooling needs.

Energy-related CO₂ emissions resulting from fossil fuel exploration and use account for approximately three-quarters of the human-generated GHG emissions in the United States, primarily in the form of CO₂ emissions from burning fossil fuels. More than half the energy-related emissions come from large stationary sources, such as power plants; approximately one-third come from transportation; and industrial processes, agriculture, forestry, other land uses, and waste management make up most of the other sources.

As previously stated, the generation of electricity can produce GHGs with criteria air pollutants that have been traditionally regulated under the Federal Clean Air Act (CAA) and California Clean Air Act (CCAA). For fossil fuel-fired power plants, the GHG emissions include primarily CO₂, with much smaller amounts of N₂O (not nitric oxide [NO] or nitrogen dioxide [NO₂], which are commonly known as nitrogen oxides [NO_x]) and CH₄ (often from unburned natural gas). For photovoltaic solar power energy generation projects, stationary-source GHG emissions are much smaller than fossil fuel-fired power plants, but the associated maintenance vehicle emissions are higher due to the different and far-afield maintenance requirements that necessitate more vehicles and more travel within the project site. Other sources of GHG emissions include SF₆ from high-voltage equipment and HFCs and PFCs from refrigeration/chiller equipment. GHG emissions from the electricity sector are dominated by CO₂ emissions from carbon-based fuels; other sources of GHG emissions are small and are more likely to be easily controlled or reused/recycled.

Scientists at the California Office of Environmental Health Hazard Assessment (COEHHA) believe that most areas in the United States will continue to warm, although some will most likely warm more than others. Predicting which parts of the country will become wetter or drier is extremely difficult, but scientists generally expect increased precipitation and evaporation as

well as drier soil in the middle parts of the country. The northern regions, such as Alaska, are expected to experience the most warming.

Emissions Inventory

CO₂ is the most common reference gas for climate change of the principal GHGs (i.e., CO₂, CH₄, N₂O, SF₆, PFCs, and HFCs). Using the GWP measurement, GHG emissions are often quantified and reported as CO₂e. Large emission sources are reported in MMTCO₂e. Worldwide, anthropogenic emissions of GHGs were approximately 49,500 MMTCO₂e in the year 2010 (IPCC 2014).

Based on data from the EPA, the total GHG emissions in the United States were 5,981 MMTCO₂e in 2020, a decrease of about 8% from 1990 levels. From year to year, emissions can rise and fall due to changes in the economy, the price of fuel, and other factors. Changes in CO₂ emissions from fossil fuel combustion are influenced by many long-term and short-term factors, including population growth, economic growth, changing energy prices, new technologies, changing behavior, and seasonal temperatures. In 2020, the decrease in CO₂ emissions from fossil fuel combustion corresponded with a decrease in energy use as a result of decreases in economic, manufacturing, and travel activity in response to the coronavirus pandemic, in addition to a continued shift from coal to less carbon-intensive natural gas and renewables in the electric power sector (USEPA 2022b). In 2020 the electric power, transportation, and industry sectors accounted for 76% of the total U.S. GHG emissions, with electric power, transportation, and industry sources emitting 25%, 27%, and 24% of GHG emissions, respectively. The residential and commercial sectors accounted for 13% and agriculture accounted for the remaining 11% of GHG emissions (USEPA 2022c).

Statewide emissions of GHG from relevant source categories for 2015 through 2022 are summarized in **Table 4.8-1, California Greenhouse Gas Emissions Inventory by Economic Sector**. In 2022, California produced 371 MMTCO₂e emissions. Transportation was the source of 38% of the State's GHG emissions, followed by industrial at 20%, electricity generation at 16%, commercial and residential sources at 11%, agriculture and forestry comprised at 8%, High GWP at 6%, and Recycling and Waste with the remaining 2% (CARB 2025b).

Table 4.8-1 California Greenhouse Gas Emissions Inventory by Economic Sector

Economic Sector	GHG Emissions (MMTCO ₂ e)*							
	2015	2016	2017	2018	2019	2020	2021	2022
Transportation	161.1	164.8	166.0	164.8	161.7	135.2	145.1	139.9
Electric Power	86.3	70.8	64.4	65.0	60.2	59.5	62.3	59.8
Industrial	82.7	81.3	81.7	82.3	80.9	73.6	74.2	72.7
Commercial and Residential	37.2	37.7	38.3	37.5	40.6	39.0	38.8	39.5
Agriculture	32.5	32.1	31.6	32.0	31.2	31.4	30.4	29.8

Table 4.8-1 California Greenhouse Gas Emissions Inventory by Economic Sector

Economic Sector	GHG Emissions (MMTCO ₂ e)*							
	2015	2016	2017	2018	2019	2020	2021	2022
High GWP	18.8	19.5	20.1	20.6	20.8	21.3	21.3	21.3
Recycling and Waste	8.1	7.9	8.2	8.2	8.3	8.5	8.3	8.2
Total GHG Emissions	427	414	410	411	404	369	381	371

Source: CARB 2025b.

Notes:

* GHG emissions are weighted using the IPCC AR4. Total emissions rounded to nearest whole number.

Kern County Greenhouse Gas Inventory

In 2012, the San Joaquin Valley Air Pollution Control District (SJVAPCD) prepared a community-wide GHG inventory for all of Kern County (SJVAPCD 2012). Year 2005 was used as the base year; GHG emissions were estimated to be 27 MMTCO₂e. The fossil fuel industry sector represented 40% of the 2005 total, followed by the electricity consumption sector at 22%. GHG emissions from electricity generation in Kern County were included in the Countywide GHG emissions, but not added in the totals. Kern County's 2005 GHG emissions, not including subtraction of sequestration sectors, are presented in **Table 4.8-2, 2005 Kern County Baseline Greenhouse Gas Emissions**.

Table 4.8-2 2005 Kern County Baseline Greenhouse Gas Emissions

Category	GHG Emissions (MTCO ₂ e)	Percent of Total
Electricity Production	13,002,127	(*)
Electricity Consumption	6,039,114	22%
Residential/Commercial/Industrial Combustion	1,281,498	5%
Transportation	4,569,913	17%
Fossil Fuels Industry	10,928,153	40%
Industrial Processes	1,852,124	7%
Waste Management	120,494	< 1%
Agriculture Fugitives	2,024,470	7%
Forestry and Land Use	11,028	<1%
Other Sources	218,823	1%
Total	27,045,617	

Source: SJVAPCD 2012.

Notes: (*) = The Kern County Communitywide GHG emissions inventory included emissions from electricity production for completeness purposes only, this sector was not included in further descriptions of Kern County's emissions.

4.8.3 Regulatory Setting

In 1988 the United Nations and the World Meteorological Organization established the IPCC to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United Nations Framework Convention on Climate Change established an agreement with the goal of controlling GHG emissions, including CH₄. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The Plan consists of more than 50 voluntary programs. In October 1993, President Clinton announced his Climate Change Action Plan, which had a goal to return GHG emissions to 1990 levels by the year 2000. This was to be accomplished through 50 initiatives that relied on innovative voluntary partnerships between the private sector and government aimed at producing cost-effective reductions in GHG emissions (California Air Pollution Control Officers Association [CAPCOA 2008]).

On March 21, 1994, the United States joined a number of countries around the world in signing the United Nations Framework Convention on Climate Change (UNFCCC). Under the convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

A particularly notable result of the UNFCCC efforts was a treaty known as the Kyoto Protocol, which was negotiated in December 1997. The agreement came into force on February 16, 2005, following ratification by Russia on November 18, 2004. When countries sign the treaty, they demonstrate their commitment to reduce their emissions of GHGs or engage in emissions trading. As of December 2006, a total of 169 countries and other governmental entities have ratified the agreement. Notable exceptions include the United States and Australia. Although U.S. Vice President Gore symbolically signed the Kyoto Protocol in 1998, for the treaty to be formally ratified, it must be ratified by the U.S. Congress, and this has not occurred to date. Other countries, like India and China, which have ratified the protocol, are not required to reduce carbon emissions under the present agreement despite their relatively large populations.

Additionally, the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol) was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere (CFCs, halons, carbon tetrachloride, and methyl chloroform) were to be phased out by 2000 (methyl chloroform was to be phased out by 2005).

Global warming and climate change have received substantial public attention for more than 15 years. For example, the U.S. Global Change Research Program was established by the Global Change Research Act of 1990 to enhance the understanding of natural and human-induced changes in the Earth's global environmental system; to monitor, understand, and predict global change; and to provide a sound scientific basis for national and international decision-making. Even so, the analytical tools have not been developed to determine the effect on worldwide global warming from a particular increase in GHG emissions, or the resulting effects on climate change in a particular locale. The scientific tools needed to evaluate the impacts that a specific project may have on the environment are even farther in the future.

Federal

U.S. Environmental Protection Agency

To date, there is no federal overarching law specifically related to climate change or the reduction of GHGs. The EPA authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA*, 549 US 497 (2007). The Supreme Court found that GHGs are air pollutants covered by the Clean Air Act, and the EPA Endangerment Findings concluded the elements CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ threatened public health for both current and future generations (Trinity Consultants 2025).

40 Code of Federal Regulations Part 98 Mandatory Reporting of Greenhouse Gases Rule

In 2009, the U.S. EPA published a rule for the mandatory reporting of GHG from sources that in general emit 25,000 metric tons or more of carbon dioxide equivalent per year in the United States. Implementation of 40 CFR Part 98 is referred to as the Greenhouse Gas Reporting Program (GHGRP). This collection of comprehensive, nationwide emissions data is intended to provide a better understanding of the sources of GHGs and to guide development of policies and programs to reduce emissions. (U.S. EPA, 2013) Additional federal actions have included the implementation of standards for vehicles, biofuel production, and power generation (Trinity Consultants 2025).

U.S. Environmental Protection Agency and National Highway Traffic Safety Administration Joint Final Rules for Vehicle Standards

On April 1, 2010, the USEPA and National Highway Traffic Safety Administration (NHTSA) announced a joint final rule to establish a national program consisting of new standards for light-duty vehicles model years 2012 through 2016. The joint rule is intended to reduce GHG emissions and improve fuel economy. The USEPA approved the first-ever national GHG emissions standards under the CAA, and NHTSA approved Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act (75 FR 25324–25728). The final rule became effective on July 6, 2010 (75 FR 25324–25728).

Federal Vehicle Standards

In August 2016, the USEPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018–2027 for certain trailers, and model years 2021–2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (USEPA and NHTSA 2016). In December 2021, EPA finalized revised national greenhouse gas (GHG) emissions standards for passenger cars and light trucks for Model Years 2023–2026. The final standards would achieve significant GHG emissions reductions along with reductions in other criteria pollutants (USEPA 2021b).

State

The sections below discuss State laws, regulations, and court decisions pertaining to GHG emissions. Additional discussion and detail of State laws and regulations is provided in Trinity

Consultants (2025) Section 4.1.3 (pgs. 4-3 through 4-18 and is incorporated herein by reference).

California Environmental Quality Act

A variety of Statewide rules and regulations have been implemented or are in development in California that mandate the quantification or reduction of GHGs. Under the California Environmental Quality Act (CEQA), an analysis and mitigation of emissions of GHGs and climate change in relation to a project is required where it has been determined that a project will result in a significant addition of GHGs. Certain Air Pollution Control Districts (APCDs) have proposed their own levels of significance. The EKAPCD, which has regulatory authority over the air pollutant emissions from this project, has adopted a significance threshold for projects where the EKAPCD acts as CEQA Lead Agency (EKAPCD 2012); however, Kern County has not adopted a significance threshold for these emissions.

California Supreme Court Ruling in *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal.4th 2014 (Newhall)

In *Center for Biological Diversity v. Department of Fish and Wildlife* (Newhall), the Supreme Court evaluated the California Department of Fish and Wildlife (CDFW) analysis of potential impacts caused by GHG emissions contained in the EIR for the proposed land development called Newhall Ranch. In the EIR, the CDFW analyzed GHG emissions under Assembly Bill (AB) 32, using the business-as-usual (BAU) comparison as its sole criterion of significance.

In *Newhall*, the Supreme Court concluded that a finding of consistency with meeting Statewide emission reduction goals is a legally permissible criterion of significance when analyzing potential impacts of GHG emissions under CEQA. However, the Court found that the EIR's conclusion that the project's emissions would be less than significant under that criterion was not supported by substantial evidence, and remanded back to the appellate court the narrow issue of whether substantial evidence supported the application of AB 32 Statewide GHG reduction goal of 29% to new land use projects.

The Court then identified "potential options" for lead agencies evaluating cumulative significance of a proposed land use development's GHG emissions in future CEQA documents, but the Court was careful to note that there was no "guarantee" that any of these would be sufficient, stating: "We do not, of course, guarantee that any of these approaches will be found to satisfy CEQA's demands as to any particular project; what follows is merely a description of potential pathways to compliance, depending on the circumstances of a given project."

The "potential pathways to compliance" suggested by the Supreme Court are as follows:

Business-As-Usual (BAU) Model: While the Court cautioned that the Scoping Plan may not be appropriate at the project-level, the BAU model might be used to determine what level of reduction from business as usual a new land use development at the proposed location must contribute in order to comply with statewide goals pursuant to AB 32. The Court specifically directed that reliance on this type of quantitative threshold must be supported by substantial evidence in the record that links the statewide GHG reduction standard to the appropriate GHG reduction standard for the specific type of project under consideration.

1. **Compliance With Regulatory Programs Designed to Reduce Greenhouse Gas Emissions:** The Court suggests that a lead agency could rely on a showing of compliance with regulatory programs designed to reduce GHG emissions in order to demonstrate consistency with AB 32's goals. The Court clarifies that a significance analysis based on compliance with such statewide regulations only goes to impacts within the area governed by the regulations.
2. **Local Climate Action Plan or Other "Geographically Specific Greenhouse Gas Emission Reduction Plans":** The Court points out that these plans may provide a basis for the tiering or streamlining of project-level CEQA analysis, so long as the plan is "sufficiently detailed and adequately supported."
3. **Regional Sustainable Community Strategy (SCS):** The Court also articulates that a Lead Agency need not additionally analyze GHG emissions from cars and light trucks in CEQA documents for certain residential, mixed-use, and transit priority projects that are consistent with an applicable SCS adopted pursuant to Senate Bill (SB) 375.
4. **Numerical GHG Significance Thresholds:** Although noting that use of such thresholds is not required, the Court favorably cited to the Bay Area Air Quality Management District GHG significance thresholds, based on compliance with AB 32, which use a "service population" GHG ratio threshold for land use projects and a 10,000-ton annual GHG emission threshold for industrial projects. The Court remanded for further consideration the application of the 29% overall Scoping Plan metric, which is used by several Air Districts and, like the favorably cited Bay Area Air Quality Management District metric, is based on AB 32.
5. **Executive Orders S-3-05 and B-30-15:** Citing to EOs S-3-05 and B-30-15, the Court cautioned that those EIRs taking a goal-consistency approach to CEQA significance may "in the near future" need to consider the project's effects on meeting emissions reduction targets beyond 2020.

Following the Supreme Court's decision in *Newhall*, the EIR at issue in that case was set aside on remand by the lower court. On November 2016, the CDFW released a draft Additional Environmental Analysis (AEA) intended to address the agency's CEQA compliance obligations (CDFW 2016). The AEA does not respond to the Supreme Court's direction to provide substantial evidence supporting the 29% BAU statutory GHG reduction threshold relied upon by the Newhall EIR. The AEA also does not include an assessment of the Newhall project's consistency with any of the Court's suggested GHG CEQA compliance pathways, although referenced documentation in the Newhall administrative record do include and confirm compliance with each pathway. Instead, as described in the AEA, the Newhall project applicant (Five Point LLC) voluntarily modified its project and proposed to achieve "net zero" GHG emissions for the project with the implementation of the project applicant's "zero net emission" proposal, which was made enforceable by the addition of 13 mitigation measures that correspond to the applicant's proposal, as further described in the AEA. The AEA states that the adoption and implementation of the 13 mitigation measures would reduce mobile source, electricity, natural gas, vegetation removal, and construction-related emissions by the amount of emissions estimated for the project and result in no net contributions of GHG emissions from the project, or "zero net emissions." The AEA further concludes that because

the project would result in no net increase of GHG emissions after implementation of the mitigation measures, there would be no contribution of GHG emissions to cumulative GHG emissions influencing global climate change and the Newhall project would not conflict with any plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs. Consequently, the AEA concludes that project GHG and climate change impacts would be less than significant (CDFW 2016, pp. 1–18).

Since *Newhall*, the County has used the EKAPCD’s numerical significance thresholds for projects located within the EKAPCD.

California Code of Regulations Title 24

Title 24 of the California Code of Regulations (CCR) was established in 1978 and serves to enhance and regulate California’s building standards. Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (Public Resources Code [PRC] Section 25402[b][1]). The regulations have the overall goal of “reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy” (PRC Section 25402). These regulations are analyzed for technological and economic feasibility (PRC Section 25402[d]) and cost effectiveness (PRC Sections 25402b)[2] and [b][3]). These building code standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and reduce air pollutant emissions either by reducing the quantity of energy required by the building (e.g., with water conservation measures that reduce water use and thus the quantity of water requiring emission-causing transportation and treatment, or with energy efficiency standards such as enhanced insulation that reduce the need for heating, ventilation, and air conditioning (HVAC) and likewise result in less energy consumption and air pollutant emissions from these HVAC uses.

Assembly Bill 1493

On July 22, 2002, former Governor Gray Davis signed AB 1493, also known as the Pavley Regulations or the Clean Car Standards. AB 1493 required the State to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of GHG emissions emitted by passenger vehicles and light-duty trucks. Subsequent regulations were adopted by the CARB in September 2004.

The regulations were threatened by automaker lawsuits and were stalled by the USEPA’s initial denial to allow California to implement GHG standards for passenger vehicles. The USEPA later granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles on June 30, 2009. On September 24, 2009, the CARB adopted amendments to the Pavley regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.

Executive Order S-1-07

Issued on January 18, 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO₂e grams per unit of fuel energy sold in California. The target of the

Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. The CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste. In addition, the Low Carbon Fuel Standard would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles. The Low Carbon Fuel Standard is anticipated to lead to the replacement of 20% of the fuel used in motor vehicles with alternative fuels by 2020.

Assembly Bill 32: California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. The legislature stated, “global warming poses a serious threat to the economic wellbeing, public health, natural resources, and the environment of California.” AB 32 caps California’s GHG emissions at 1990 levels by 2020 and requires CARB, the State agency charged with regulating statewide air quality, to adopt rules and regulations that would achieve GHG emissions equivalent to Statewide levels in 1990 by 2020. This law establishes periodic targets for reductions, and requires certain facilities to report emissions of GHGs annually; AB 32 also reserves the ability to reduce emissions targets for certain sectors that contribute the most to emissions of GHGs, including the transportation sector.

This agreement represents the first enforceable statewide program in the U.S. to cap all GHG emissions from major industries that includes penalties for non-compliance. While acknowledging that national and international actions will be necessary to fully address the issue of global warming, AB 32 lays out a program to inventory and reduce GHG emissions in California and from power generation facilities located outside the state that serve California residents and businesses.

The list of impacts included in AB 32 may be considered substantial evidence of environmental impacts requiring analysis in CEQA documents. AB 32 charges CARB with responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. CARB has adopted a list of discrete early action measures that can be implemented to reduce GHG emissions. CARB has defined the 1990 baseline emissions for California, and has adopted that baseline as the 2020 statewide emissions cap. CARB is conducting rulemaking for reducing GHG emissions to achieve the emissions cap by 2020. In designing emission reduction measures, CARB must aim to minimize costs, maximize benefits, improve and modernize California’s energy infrastructure, maintain electric system reliability, maximize additional environmental and economic co-benefits for California, and complement the state’s efforts to improve air quality.

The AB 32 Scoping Plan contains the main strategies California will use to reduce the GHG emissions that cause climate change. The scoping plan has a range of GHG emission reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and nonmonetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 cost of implementation fee regulation to fund the program. The proposed

scoping plan was released on October 15, 2008, and approved at the Board hearing on December 12, 2008.

On October 20, 2011, CARB approved a cap-and-trade program as part of AB 32, with compliance obligations that became effective in 2013. An initial cap will be implemented for the electrical sector and any large industrial source that emits more than 25,000 MTCO₂e emissions per year. Over time, the cap will be reduced so that the program will apply to a broader range of facilities.

In May 2014, CARB adopted a Scoping Plan Update that revised the 2020 emissions target to 431 MMTCO₂e (based on updated GWPs for GHGs) and also builds upon the initial Scoping Plan with new strategies and recommendations. The 2014 Scoping Plan Update identified opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The 2014 Scoping Plan Update also defined the CARB's climate change priorities for the following 5 years and set the groundwork to reach California's long-term climate goals set forth in EO S-3-05 and B-16-2012. EO B-16-2012 directed State entities under the governor's direction and control to support and facilitate development and distribution of zero-emission vehicles (ZEVs). Former Governor Jerry Brown's executive order set a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a Statewide basis, the executive order also established a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050.

Assembly Bill 32 Climate Change Scoping Plan

Pursuant to Assembly Bill 32 (AB 32) CARB adopted the initial *Climate Change Scoping Plan* (Scoping Plan) in 2008, which outlines actions recommended to obtain the AB 32 goals. The Scoping Plan called for an "ambitious but achievable" reduction in California's GHG emissions, cutting approximately 30% from business-as-usual emission levels projected for 2020. AB 32 requires that CARB update the scoping plan at least every five years. The first update to the Climate Change Scoping Plan was released on May 15, 2014, and built upon the initial Scoping Plan with new recommendations. Shortly after California met the 2020 GHG reduction target, the 2017 Scoping Plan was developed to identify new policies and actions to meet the 2030 GHG reduction goals (outlined in Executive Order B-30-15), and to address international goals. In November 2022, CARB redeveloped the 2017 Scoping Plan to further assess how the GHG emission reduction target can be achieved (Trinity Consultants 2025).

The 2022 Scoping Plan for Achieving Carbon Neutrality (Scoping Plan) sets out actions to reduce GHG, criteria pollutant, and toxic air contaminant emissions in California. It integrates ongoing efforts to transition away from fossil fuels by identifying and planning for the phase-in of clean technologies and sustainable fuels. This comprehensive plan outlines a technologically feasible and cost-effective path to achieve carbon neutrality by 2045, aligning with California's goal to reduce GHG emissions by at least 40 percent below 1990 levels by 2030. The plan emphasizes the critical importance of the coming decade for transformative action and introduces new GHG reduction strategies, including the consideration of Natural and Working Lands as both emission sources and carbon sinks. It outlines specific actions, evaluates their impact on air quality and the economy, and emphasizes the importance of partnerships to drive investment in a low-carbon economy (Trinity Consultants 2025).

The 2022 Scoping Plan involves the following principles which inform the approach to addressing climate challenges:

- Unprecedented Investments in a Sustainable Future,
- Centering Equity,
- Maximizing Air Quality and Health Benefits,
- Economic Resilience,
- Partnering Across Government,
- Partnering with the Private Sector,
- Supporting Innovation,
- Engagement with Partners to Develop, Coordinate, and Export Policies,
- Working Toward Carbon Neutrality,
- Supporting Healthy and Resilient Lands, and
- Maintaining the Focus on Methane and Short-Lived Climate Pollutants.

Senate Bill 97

SB 97, enacted in August 2007, required the California Office of Planning and Research (OPR) to develop guidelines for the mitigation of GHG emissions or effects related to releases of GHG emissions. On April 13, 2009, OPR submitted proposed amendments to the California Natural Resources Agency (CNRA), in accordance with SB 97, regarding analysis and mitigation of GHG emissions. Formal rulemaking was conducted in 2009 prior to adopting the amendments. As discussed below, the CEQA significance analysis for the project was conducted in accordance with the OPR guidance developed under this statute.

As part of the guidelines, OPR recommends that CARB set Statewide thresholds of significance and emphasized the need to have a consistent threshold available to analyze projects. The draft guidelines also noted that the analyses should be based on the best available information. As directed by SB 97, the CNRA adopted amendments to the State CEQA Guidelines for GHG emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the amendments and filed them with the Secretary of State for inclusion in the CCR. The amendments became effective on March 18, 2010.

Senate Bill 375

In August 2008, the legislature passed, and on September 30, 2008, former Governor Schwarzenegger signed, SB 375 (Steinberg), which addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. Regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, as determined by the CARB, are required to consider the emission reductions associated with vehicle emission standards (see AB 1493), the composition of fuels (see EO S-1-07), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations will be responsible for preparing an SCS within their Regional Transportation Plan (RTP).

Senate Bill 1078

Approved by former Governor Gray Davis in September 2002, SB 1078 (Sher) established the Renewable Portfolio Standard (RPS) program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010 (see SB 107).

Senate Bill 107

Approved by former Governor Arnold Schwarzenegger on September 26, 2006, SB 107 (Simitian) requires investor-owned utilities such as the Pacific Gas and Electric Company (PG&E), Southern California Edison (SCE), and San Diego Gas and Electric (SDG&E), to generate 20% of their electricity from renewable sources by 2010.

Advanced Clean Cars Program

In January 2012, the CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, the CARB will propose new emission standards to reduce smog-forming emissions beginning with 2015 model-year vehicles. To reduce GHG emissions, the CARB, in conjunction with the USEPA and the NHTSA, has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The ZEV program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018 to 2025 model years. The Clean Fuels Outlet regulation will ensure that fuels such as electricity and hydrogen are available to meet the fueling needs of the new advanced technology vehicles as they come to the market.

Senate Bill 605

On September 21, 2014, former Governor Jerry Brown signed SB 605, which requires the CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state.

Senate Bill 350

Former Governor Jerry Brown signed SB 350 on October 7, 2015, which expands the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the California Public Utilities Commission (CPUC), in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator (CAISO) into a regional organization to promote the development of regional electricity transmission markets in the western states and to

improve the access of consumers served by the CAISO to those markets, pursuant to a specified process.

California Air Pollution Control Officers Association

The CAPCOA is the association of air pollution control officers representing all 35 air quality agencies throughout California. The CAPCOA is not a regulatory body, but it has been an active organization in providing guidance in addressing the CEQA significance of GHG emissions and climate change as well as other air quality issues.

California Air Resources Board Cap-and-Trade for Stationary Sources and Fuels

The SJVAPCD approved Policy APR-2025 (CEQA Determinations of Significance for Projects Subject to CARB's GHG Cap-and-Trade Regulation) to evaluate whether projects subject to the Cap-and-Trade Regulation would comply with plans for reducing GHG emissions supported by an environmental review compliant with CEQA requirements, and that compliance with this plan would adequately mitigate GHG emissions for CEQA purposes under the SJVAPCD thresholds. EKAPCD subsequently determined that EKAPCD should follow an approach compatible with SJVAPCD's when EKAPCD is serving as the CEQA Lead Agency for projects within its jurisdiction. EKAPCD determined that by following a CEQA GHG review process similar to SJVAPCD's, EKAPCD will maintain substantial consistency throughout Kern County in how GHG analysis under CEQA is performed. (EKAPCD 2012) Although Kern County is the Lead Agency for the proposed project and the proposed project is located within the jurisdiction of EKAPCD, consideration of the SJVAPCD Cap-and-Trade Regulation is relevant here.

SJVAPCD concluded that the Cap-and-Trade Regulation is such a plan, and that compliance would result in a project having a less-than-significant impact for GHG emissions that are subject to the cap-and-trade regulations. The cap-and-trade regulation applies to providers of electricity generated or imported into California, large industrial facilities emitting more than 25,000 MTCO₂e per year, and other specific facilities, as well as to distributors of transportation fuels, natural gas, and other fuels. The regulation requires that emissions generated by these facilities and combustion of fuels be reduced over time. Accordingly, the SJVAPCD found that "GHG emission increases caused by fuel use (other than jet fuels [which are not regulated under the cap-and-trade regulation]) are determined to have a less-than-significance impact on global climate change under CEQA." SJVAPCD Policy APR-2015 is consistent with the *Association of Irrigated Residents v. Kern County Board of Supervisors, et al.* (2017) 17 Cal.App.5th 708 ("AIR"), wherein the Court of Appeal held that CEQA does in fact authorize a Lead Agency "to determine a project's greenhouse gas emissions will have a less than significant effect on the environment based on the project's compliance with the cap-and-trade program."

Executive Orders

California Governors have issued several executive orders regarding climate change and GHG reductions. These orders include, but are not limited to, the following discussed below.

Executive Order S-3-05

EO S-3-05 was established by former Governor Arnold Schwarzenegger in June 2005. EO S-3-05 establishes Statewide emission reduction targets through the year 2050:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80% below 1990 levels.

Executive Order S-13-08

Former Governor Arnold Schwarzenegger issued EO S-13-08 on November 14, 2008. The executive order is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. It directs State agencies to take specified actions to assess and plan for such impacts. It directs the CNRA, in cooperation with the DWR, CEC, California's coastal management agencies, and the Ocean Protection Council, to request that the National Academy of Sciences prepare a Sea Level Rise Assessment Report to assess the State's vulnerability. The report summarizes key climate change impacts to the State for the following areas: public health, ocean and coastal resources, water supply and flood protection, agriculture, forestry, biodiversity and habitat, and transportation and energy infrastructure. The report then recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

Executive Order B-16-12

Former Governor Jerry Brown issued EO S-16-12 on March 23, 2012. The executive order requires that State entities under the governor's direction and control support and facilitate the rapid commercialization of ZEVs.

Executive Order B-18-12

Former Governor Jerry Brown issued EO S-18-12 on April 25, 2012. The executive order directs State agencies, departments, and other entities under the governor's executive authority take actions to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline.

Executive Order B-30-15

On April 29, 2015, former Governor Jerry Brown issued EO B-30-15, which identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32.

California Code of Regulations Title 23, Article 22.5

California extended emergency water conservation regulations based on ongoing and projected future drought conditions caused or exacerbated by climate change.

California Code of Regulations Title 14, Chapter 3

The CNRA and OPR adopted the updated State CEQA Guidelines in December 2018; however, the updated guidelines did not change the guidelines or Appendix G (often used as default CEQA significance standards) relating to GHG. The guidelines did adopt new CEQA

provisions regarding VMT as CEQA impacts as of July 1, 2020, based on the relationship between VMT and health benefits of encouraging drivers to walk or bike instead of drive, the wear and rainwater runoff that occurs on roads and highways, and air pollutant emissions (including GHG) from avoided vehicle travel when VMT is reduced. The OPR also issued non-binding guidance documents relating to VMT and GHG.

Executive Order B-55-18

EO B-55-18 (September 2018) establishes a Statewide policy for the State to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. The goal is an addition to the existing Statewide targets of reducing the State's GHG emissions. The CARB will work with relevant State agencies to ensure that future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

Local

2022 Regional Transportation Plan/Sustainable Communities Strategy

The Kern Council of Governments (Kern COG) is the Regional Transportation Planning Agency (RTPA) for the Kern County region. Kern COG adopted the 2022 RTP/SCS in July 2022, updating the previous 2018 RTP/SCS. The 2022 RTP is a 24-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It has been developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between Federal, State, regional, and local agencies. Included in the 2022 RTP is the SCS required by California's Sustainable Communities and Climate Protection Act, of SB 375. SB 375 provides for closer integration of the RTP/SCS with the Regional Housing Needs Allocation (RHNA) ensuring consistency between low-income housing need and transportation planning. SB 375 includes the following three primary findings related to the RTP/SCS development process:

- CARB was required to develop regional GHG emission reduction targets for cars and light trucks for each of the 18 Metropolitan Planning Organizations (MPOs) in California, including Kern COG. CARB approved targets for the San Joaquin Valley in January 2013. Although focused on the San Joaquin Valley, the RTP/SCS applies to all of Kern County. The target for Kern County beginning October 1, 2018, is a per capita reduction in GHG emissions from passenger vehicle travel of 9% by 2020 and 15% by 2035 relative to 2005 levels.
- Kern COG was required to prepare an SCS that specifies how the GHG emission reduction target set by the CARB will be achieved. If the target cannot be met through the SCS, then an Alternative Planning Strategy (APS) shall be prepared by Kern COG. Chapter 4 of the 2022 RTP/SCS includes the SCS for Kern COG. The RTP/SCS for Kern County anticipates per capita CO₂e reductions of 10.8% for 2020 and 15.1% for 2035, exceeding the respective 9% and 15% targets established by CARB in 2018.
- Streamlines CEQA requirements for specific residential and mixed-use developments that are consistent with the Kern COG SCS or APS (as determined by the CARB) to achieve regional GHG emissions reduction target (Kern COG 2022).

Eastern Kern Air Pollution Control District

Eastern Kern Air Pollution Control District Policy Addendum to CEQA Guidelines Addressing GHG Emission Impacts for Stationary Source Projects When Serving As Lead CEQA Agency (EKAPCD 2012) provides EKAPCD recommendations for thresholds of significance when performing CEQA review of projects for which the EKAPCD is the CEQA Lead Agency. In relevant part, under the EKAPCD threshold a project that emits less than 25,000 metric tons per year (tpy) of GHGs would be determined to have a less than significant individual or cumulatively considerable impact on GHG emissions and would not require further CEQA review. EKAPCD believes a 25,000 tpy threshold is appropriate for determining that a project will have no significant or cumulatively considerable impact because:

- 25,000 tpy is the EKAPCD GHG reporting requirement as stated in Section VI.B of EKAPCD Rule 201.3, Federally Enforceable Limits on Potential to Emit, noting that CARB and EPA have determined that a 25,000 metric ton per year threshold is appropriate for GHG reporting because it would encompass facilities whose GHG emissions may be subject to regulation; and
- 25,000 tpy is less than the threshold of 25,000 MTCO₂e per year CARB uses for industrial source applicability as the first phase of the AB 32 Cap-and Trade Program and is therefore slightly more stringent than the Cap-and-Trade Program.

Kern County

Kern County has not adopted a GHG reduction plan or climate action plan as of the publication of this EIR.

Kern County General Plan

The project site is located within the *Kern County General Plan* and the *Cameron Canyon Specific Plan*. The policies, goals, and implementation measures in the *Kern County General Plan* and the *Cameron Canyon Specific Plan* applicable to GHGs as related to the project are provided in **Section 4.3, Air Quality**. Some of the listed policies, goals, and implementation measures would indirectly impact GHG emissions through the reduction of fossil fuel use.

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

1.10 General Provisions

1.10.2 Air Quality

Policies

- **Policy 18.** The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be placed on minimizing air quality degradation in the desert to enable effective military operations and in the valley region to meet attainment goals.
- **Policy 19.** In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision-making body, as part of its deliberations, will ensure that:
 - (a) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and

- (b) The benefits of the project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.
- **Policy 22.** Kern County shall continue to work with the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District toward air quality attainment with federal, state, and local standards.
- **Policy 23.** The County shall continue to implement the local government control measures in coordination with the Kern Council of Governments and the San Joaquin Valley Unified Air Pollution Control District.

Implementation Measures

- **Implementation Measure F.** All discretionary permits shall be referred to the appropriate air district for review and comment.
- **Implementation Measure G.** Discretionary development projects involving the use of tractor trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:
 - a. Minimizing idling time.
 - b. Electrical overnight plug-ins.
- **Implementation Measure H.** Discretionary projects may use one or more of the following to reduce air quality effects:
 - a. Pave dirt roads within the development.
 - b. Pave outside storage areas.
 - c. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
 - d. Use of alternative fuel fleet vehicles or hybrid vehicles.
 - e. Use of emission control devices on diesel equipment.
 - f. Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces.
 - g. Provide bicycle lockers and shower facilities on site.
 - h. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
 - i. The use and development of park and ride facilities in outlying areas.
 - j. Other strategies that may be recommended by the local Air Pollution Control Districts.

Cameron Canyon Specific Plan

Section VII. Circulation Element

Goals

- **Goal 1.** To provide for the efficient movement of traffic into, out of, and through the Specific Plan area.

4.8.4 Impacts and Mitigation Measures

This section describes the methodology used in conducting the CEQA impact analysis for GHG emissions, the thresholds of significance used in assessing impacts to GHG emissions, and the assessment of impacts to GHG emissions and global climate change, including relevant mitigation measures.

Methodology

This section discusses the methodologies used to conduct the evaluation of GHG emission impacts for the project, including guidelines for preparing environmental documents under CEQA and technical methods employed in the evaluation. The proposed project's potential impacts to GHGs have been evaluated using a variety of resources, including emissions modeling and impact analysis based on the *Air Quality and Greenhouse Gas Assessment Mojave Life of Mine Reclamation Plan Amendment* (Trinity Consultants 2025), provided in **Appendix C** of this EIR and incorporated by reference herein.

The proposed project's GHG emissions are estimated using the CalEEMod program (version 2016.3.1 & version 2022.1), EMFAC2021, EMFAC 2025, and the California Climate Action Registry General Reporting Protocol (Version 3.1). While the project would not affect the existing cement plant's use permit, operating permits, or regulatory status, Trinity Consultants (2025) includes GHG emission calculations for vested mining and cement plant operations for disclosure purposes. The existing production rate will not increase as a result of the project. Therefore, the non-reclamation (i.e., vested mining, processing, and cement production) GHG emissions in Trinity Consultants (2025) were set equal to the baseline emissions (discussed below). These emissions were not modeled as the net emissions from the mining and cement plant operations are zero. Sources of emissions associated with the current mining and cement plant operations include drilling and blasting; cement plant; off road equipment exhaust; and on road vehicle exhaust. The analysis also considers the GHG emissions from cement plant demolition. Although operation and demolition of the cement plant cannot occur at the same time, the sum of the net total maximum daily and annual emissions of operations and demolition is conservatively presented in the emissions estimates. Since the net emissions from the cement plant operations are zero, the net increase from cement plant operations is represented by the emissions from demolition operations (Trinity Consultants 2025).

Because the facility is an existing operation that generates GHG emissions, this CEQA evaluation compares the change in GHG emissions resulting from the proposed project to existing baseline emissions. To determine the net change in GHG emissions related to the proposed project, baseline emissions were estimated. Although CEQA anticipates that the baseline for a CEQA analysis normally consists of the physical environmental conditions as

they exist when environmental review begins, CEQA and CEQA court decisions also recognize that alternative approaches to establishing baseline may be appropriate. The baseline condition at the project site involves the existing mining, cement production, and reclamation activities. Such activities are characterized by fluctuating production and associated air emissions, in response to continually changing market demands and other factors. An emission inventory that considers only conditions existing at the time of environmental review could substantially over- or under-represent typical conditions. Accordingly, baseline annual air pollutant and GHG emissions for the GHG analysis are based on estimated emissions associated with annual average production levels at the site over the period from January 1, 2015, to December 31, 2020. This timeframe includes periods of relatively high production as well as relatively low production in response to changing market demands. GHG emissions from the cement plant were quantified by the project proponent as part of the EKAPCD's Federal Operating Permit process and are reported to the EKAPCD annually. These emissions are not modeled or included in the total average baseline emissions and are only presented for informational purposes (Trinity Consultants 2025).

Thresholds of Significance

The *CEQA Guidelines* provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and global climate change impacts. The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State *CEQA Guidelines*, to determine if a project could potentially have a significant environmental impact from the emissions of GHGs. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact on GHG emissions if it would:

- a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or,
- b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Kern County has not developed a quantitative threshold of significance for GHG emissions, but for this analysis uses the quantified threshold of 25,000 metric tons of CO₂e per year as recommended by the EKAPCD.

In March 2012, the EKAPCD adopted the Addendum to its CEQA Implementation Document to address GHG impacts, including establishing quantitative thresholds for determining significance of GHG emissions when the EKAPCD is the CEQA lead agency. In these circumstances, a project is considered to have a significant impact or cumulatively considerable impact if it exceeds the following criteria:

- Generate 25,000 MTCO₂e or more per year

The above impact would be considered to be fully reduced to below the significance level if it meets one of the following conditions:

- The project demonstrates to the EKAPCD that it is in compliance with a state GHG reduction plan such as AB 32 or future federal GHG reduction plan if it is more stringent than the state plan; or
- Project GHG emissions can be reduced by at least 20 percent below business as usual through implementation of one or more of the following strategies:
 - a. Compliance with a Best Performance Standard as set forth in Section VI of the Addendum to the EKAPCD CEQA Implementation Document;
 - b. Compliance with GHG Offset as detailed in Section VI of the Addendum to the EKAPCD CEQA Implementation Document; and/or
 - c. Compliance with an Alternative GHG Reduction Strategy as discussed in Section VII of the Addendum to the EKAPCD CEQA Implementation Document.

As such, project-generated emissions were compared to the applicable EKAPCD adopted GHG threshold of 25,000 metric tons per year.

Project Impacts

Impact 4.8-1: The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

The baseline condition pertaining to GHG emissions at the project site involves the existing mining, cement production, and reclamation activities. Sources of operational baseline GHG emissions consist of the same source types as the proposed project and include:

- Off road equipment exhaust; and
- On road vehicle exhaust (on and off site).

Sources of emissions associated with the current mining and cement plant operations include:

- Drilling and blasting;
- Cement Plant;
- Off road equipment exhaust; and
- On road vehicle exhaust.

Table 4.8-3, *Baseline GHG Operational Emissions*, summarizes estimated average annual emissions associated with the baseline period.

Table 4.8-3 Baseline GHG Operational Emissions

Activity	Metric Tons per Year			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Cement Plant	1,077,919.67	0	0	1,077,919.67
Blasting	149.54	0	0	149.54
Off Road Vehicles (Combustion)	4,251.47	1.11	0	4,282.41
On Road Vehicles (Combustion)	8,676.77	0.18	1.36	9,041.06
Total Maximum Annual GHG Emissions	1,090,997.45	1.29	1.36	1,091,392.69

Source: Trinity Consultants 2025.

The proposed project involves reclamation activities and does not include construction activities, however, cement plant demolition is included under emissions associated with the proposed project. Although cement plant operations and demolition cannot occur simultaneously, the sum of the total maximum daily and annual emissions of operations and demolition is conservatively assumed for the analysis. It is important to note that the project GHG emissions estimates represent a conservative estimate of future reclamation activities, which are expected to remain consistent to current reclamation activities. Actual project emissions may be less than those presented (Trinity Consultants 2025). **Table 4.8-4, *Project GHG Emissions***, summarizes estimated average annual emissions associated with the project.

Table 4.8-4 Project GHG Emissions

Activity	Metric Tons per Year			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Cement Plant Scenarios				
<i>Cement Plant Operations</i>	<i>1,077,919.67</i>	<i>0</i>	<i>0</i>	<i>1,077,919.67</i>
<i>Cement Plant Demolition</i>	<i>890.31</i>	<i>0.03</i>	<i>0.05</i>	<i>895.48</i>
Cement Plant Subtotal	1,078,809.98	0.03	0.05	1,078,815.15
Reclamation Activities				
<i>Blasting</i>	<i>149.54</i>	<i>0</i>	<i>0</i>	<i>149.54</i>
<i>Off Road Vehicles (Combustion)</i>	<i>3,815.76</i>	<i>0.57</i>	<i>0</i>	<i>3,831.63</i>
<i>On Road Vehicles (Combustion)</i>	<i>8,695.05</i>	<i>0.18</i>	<i>1.36</i>	<i>9,059.39</i>

Table 4.8-4 Project GHG Emissions

Activity	Metric Tons per Year			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Reclamation Activities Subtotal	12,660.35	0.75	1.36	13,040.56
Total Maximum Annual GHG Emissions	1,091,470.33	0.78	1.40	1,091,855.70

Source: Trinity Consultants 2025.

Based on the data presented in **Tables 4.8-3 and 4.8-4**, above, GHG emissions impact from implementing the project are calculated at the project-specific level for operation and the net change in GHG emissions is presented in **Table 4.8-5, *Estimated Net Change in Annual GHG Emissions (MT/Year)***.

Table 4.8-5 Estimated Net Change in Annual GHG Emissions (MT/Year)

Source	Metric Tons per Year			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Baseline Average Emissions	1,090,997.5	1.3	1.4	1,091,392.7
Project Emissions	1,091,470.3	0.8	1.4	1,091,855.7
Net Emissions	472.9	-0.5	0.0	463.0
EKAPCD's Significance Threshold	--	--	--	25,000
Significance Threshold Exceeded?	--	--	--	No

Source: Trinity Consultants 2025.

As demonstrated in **Table 4.8-5**, project activities would not exceed the EKAPCD GHG threshold. Therefore, the proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on global warming/climate change.

Mitigation Measures

Mitigation is not required.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact 4.8-2: The project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

In accordance with EKAPCD CEQA thresholds for the evaluation of GHG impacts, a project would not have a significant GHG impact if it emits less than 25,000 MTCO₂e per year. As discussed above, *Eastern Kern Air Pollution Control District Policy Addendum to CEQA*

Guidelines Addressing GHG Emission Impacts For Stationary Source Projects When Serving As Lead CEQA Agency (EKAPCD 2012) provides EKAPCD recommendations for thresholds of significance when performing CEQA review of projects for which the EKAPCD is the CEQA Lead Agency. Although EKAPCD is not the CEQA lead agency for the proposed project, the County has determined that the EKAPCD GHG CEQA impact significance threshold is appropriate to apply for evaluation of the proposed project. Pursuant to the EKAPCD threshold, a project that emits less than 25,000 MTCO₂e per year would be determined to have a less than significant individual or cumulatively considerable impact on GHG emissions and would not require further CEQA review. EKAPCD believes the MTCO₂e per year threshold is appropriate for determining that a project will have no significant or cumulatively considerable impact because:

- 25,000 tpy is the EKAPCD GHG reporting requirement as stated in Section VI.B of EKAPCD Rule 201.3, Federally Enforceable Limits on Potential to Emit, noting that CARB and EPA have determined that a 25,000 metric ton per year threshold is appropriate for GHG reporting because it would encompass facilities whose GHG emissions may be subject to regulation; and
- 25,000 tpy is less than the threshold CARB uses for industrial source applicability as the first phase of the AB 32 Cap-and Trade Program and is therefore slightly more stringent than the Cap-and-Trade Program.

As discussed at **Impact 4.8-1** and presented in **Table 4.8-5**, above, GHG emissions associated with the proposed project would be below the 25,000 MTCO₂e per year threshold. Thus, the proposed project would have a less than significant project-specific and cumulative impact associated with GHG emissions.

Applicable GHG-reduction plans include Kern COG's 2022 RTP/SCS, which was approved by the CARB in July 2022, and the CARB's 2022 *Climate Change Scoping Plan*. Consistency with these plans is discussed below.

2022 Regional Transportation Plan/Sustainable Communities Strategy

The 2022 RTP/SCS identifies Transit Priority Centers to be developed for urbanized uses around which future transit, vanpooling services, and other smart growth and transportation practices could be implemented to accommodate future population and economic growth. The intent of these measures is to reduce future GHG emissions associated with mobile sources. The proposed project is consistent with the projected land use development patterns and transit priority employment place types identified in the 2022 RTP/SCS.

Climate Change Scoping Plan

California climate change policies and measures, as listed in the 2022 *Climate Change Scoping Plan*, are outlined in **Table 4.8-6**, 2022 *Climate Change Scoping Plan Policies and Measures*, with an assessment of each whether the project would impact the recommended measures.

Table 4.8-6 2022 Climate Change Scoping Plan Policies and Measures

Sector/Scoping Plan Recommended Action	Applies to Project?
GHG Emissions Reductions Relative to the SB 32 Target: <ul style="list-style-type: none"> 40% below 1990 levels by 2030 	Yes, the project will contribute to the SB 32 target. The project will result in a reduction of GHG emissions, furthering the goal of reaching the 2030 target.
Smart Growth / Vehicle Miles Traveled (VMT): <ul style="list-style-type: none"> VMT per capita reduced 25% below 2019 levels by 2030, and 30% below 2019 levels by 2045 	Yes, the project will contribute to the SB 375 target. The project will result in a reduction of GHG emissions, furthering the goal of reaching the 2045 target.
Light-duty Vehicle (LDV) Zero Emission Vehicles (ZEVs): <ul style="list-style-type: none"> 100% of LDV sales are ZEV by 2035 	Yes, the project considers combustion emissions from employee vehicles. However, the project does not have an impact on LDV sales.
Truck ZEVs: <ul style="list-style-type: none"> 100% of medium-duty vehicle (MDV)/heavy duty vehicle (HDV) sales are ZEV by 2040 (AB 74 University of California Institute of Transportation Studies [ITS] report) 	Yes, the project considers combustion emissions from fuel transport and water trucks (MDV). However, the project does not have an impact on MDV sales.
Aviation: <ul style="list-style-type: none"> 20% of aviation fuel demand is met by electricity (batteries) or hydrogen (fuel cells) in 2045. Sustainable aviation fuel meets most or the rest of the aviation fuel demand that has not already transitioned to hydrogen or batteries. 	No, the project does not involve aviation.
Ocean-going Vessels (OGV): <ul style="list-style-type: none"> 2020 OGV At-Berth regulation fully implemented, with most OGVs utilizing shore power by 2027. 25% of OGVs utilize hydrogen fuel cell electric technology by 2045. 	No, the project does not involve OGV.
Port Operations: <ul style="list-style-type: none"> 100% of cargo handling equipment is zero-emission by 2037. 100% of drayage trucks are zero emission by 2035. 	No, the project does not involve port operations.
Freight and Passenger Rail: <ul style="list-style-type: none"> 100% of passenger and other locomotive sales are ZEV by 2030. 100% of line haul locomotive sales are ZEV by 2035. Line haul and passenger rail rely primarily on hydrogen fuel cell technology, and others primarily utilize electricity. 	No, the project does not involve rail travel.
Oil and Gas Extraction: <ul style="list-style-type: none"> Reduce oil and gas extraction operations in line with petroleum demand by 2045. 	No, the project does not involve oil and gas extraction.
Petroleum Refining: <ul style="list-style-type: none"> CCS on majority of operations by 2030, beginning in 2028. Production reduced in line with petroleum demand. 	No, the project does not involve petroleum refining.

Table 4.8-6 2022 Climate Change Scoping Plan Policies and Measures

Sector/Scoping Plan Recommended Action	Applies to Project?
<p>Electricity Generation:</p> <ul style="list-style-type: none"> • Sector GHG target of 38 million metric tons of carbon dioxide equivalent (MMTCO₂e) in 2030 and 30 MMTCO₂e in 2035. • Retail sales load coverage. • 20 gigawatts (GW) of offshore wind by 2045. • Meet increased demand for electrification without new fossil gas-fired resources. 	No, the project does not involve electricity generation.
<p>New Residential and Commercial Buildings:</p> <ul style="list-style-type: none"> • All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030. 	No, the project does not involve residential buildings.
<p>Existing Residential Buildings:</p> <ul style="list-style-type: none"> • 80% of appliance sales are electric by 2030 and 100% of appliance sales are electric by 2035. • Appliances are replaced at end of life such that by 2030 there are 3 million all-electric and electric-ready homes—and by 2035, 7 million homes—as well as contributing to 6 million heat pumps installed statewide by 2030. 	No, the project does not involve residential buildings.
<p>Existing Commercial Buildings:</p> <ul style="list-style-type: none"> • 80% of appliance sales are electric by 2030, and 100% of appliance sales are electric by 2045. • Appliances are replaced at end of life, contributing to 6 million heat pumps installed statewide by 2030. 	No, the project does not involve commercial buildings.
<p>Food Products:</p> <ul style="list-style-type: none"> • 7.5% of energy demand electrified directly and/or indirectly by 2030; 75% by 2045. 	No, the project does not involve food products.
<p>Construction Equipment:</p> <ul style="list-style-type: none"> • 25% of energy demand electrified by 2030 and 75% electrified by 2045. 	No, the project does not involve construction operations.
<p>Chemicals and Allied Products; Pulp and Paper:</p> <ul style="list-style-type: none"> • Electrify 0% of boilers by 2030 and 100% of boilers by 2045. • Hydrogen for 25% of process heat by 2035 and 100% by 2045 • Electrify 100% of other energy demand by 2045. 	No, the project does not involve chemical products or pulp and paper.
<p>Stone, Clay, Glass, and Cement:</p> <ul style="list-style-type: none"> • CCS on 40% of operations by 2035 and on all facilities by 2045. • Process emissions reduced through alternative materials and CCS. 	No, the project does not involve a modification to the cement manufacturing plant. CalPortland will comply with all relevant decarbonization regulations.
<p>Other Industrial Manufacturing:</p> <ul style="list-style-type: none"> • 0% energy demand electrified by 2030 and 50% by 2045. 	No, the project does not involve industrial manufacturing.
<p>Combined Heat and Power:</p> <ul style="list-style-type: none"> • Facilities retire by 2040. 	No, the project does not involve combined heat and power.

Table 4.8-6 2022 Climate Change Scoping Plan Policies and Measures

Sector/Scoping Plan Recommended Action	Applies to Project?
Agriculture Energy Use: <ul style="list-style-type: none"> 25% energy demand electrified by 2030 and 75% by 2045. 	No, the project does not involve agriculture.
Low Carbon Fuels for Transportation: <ul style="list-style-type: none"> Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen. 	No, the project will not involve fuel production.
Low Carbon Fuels for Buildings and Industry: <ul style="list-style-type: none"> In 2030s biomethane blended in pipeline. Renewable hydrogen blended in fossil gas pipeline at 7% energy (~20% by volume), ramping up between 2030 and 2040. In 2030s, dedicated hydrogen pipelines constructed to serve certain industrial clusters 	No, the project does not involve pipelines.
Non-combustion Methane Emissions: <ul style="list-style-type: none"> Increase landfill and dairy digester methane capture. Some alternative manure management deployed for smaller dairies. Moderate adoption of enteric strategies by 2030. Divert 75% of organic waste from landfills by 2025. Oil and gas fugitive methane emissions reduced 50% by 2030 and further reductions as infrastructure components retire in line with reduced fossil gas demand. 	No, the project does not involve the listed non-combustion methane sources.
High GWP Potential Emissions: <ul style="list-style-type: none"> Low GWP refrigerants introduced as building electrification increases, mitigating HFC emissions. 	No, the project does not involve refrigerants.

Source: Trinity Consulting 2025, Table 4-5.

As presented in **Table 4.8-6**, the proposed project would not conflict with any of the provisions of the *2022 Climate Change Scoping Plan*.

As the proposed project would not conflict with either the *2022 RTP/SCS* or the *2022 Climate Change Scoping Plan*, the project impact related to a conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

As discussed previously, impacts associated with GHG emissions are cumulative in nature, rather than project-specific. Refer to **Section 4.8.1, *Introduction***, for a discussion of the cumulative setting for GHG emissions.

The effects of this project are evaluated in consideration of the net change in GHG emission compared to a quantified significance threshold (**Impact 4.8-1**) and in consideration of whether the project is consistent with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of greenhouse gases (**Impact 4.8-2**). If the project does not result in GHG emissions that exceed the applicable threshold and does not conflict with applicable GHG emission reduction plans, it is reasonable to conclude that the project would not result in a significant contribution to the cumulative impact of global climate change.

The geographic scope for cumulative impacts for GHGs includes other projects planned within a 6-mile radius of the project site. This is discussed further in **Section 3.7, *Cumulative Effects Overview***. While projects in the region and the larger area affect the volume of GHG in the atmosphere, by focusing on plans scheduled to be implemented within the project site and in the vicinity of the project site, the analysis of cumulative impacts can be given a regional context.

Impact 4.8-3: The project would contribute to cumulative greenhouse gas emissions impacts.

The Kern County 2005 base year GHG emissions inventory was estimated to be 27 MMTCO₂e per year, of which the Fossil Fuel Industry sector represents 40%, followed by the Electricity Consumption sector at 22% (see **Table 4.8-2, *2005 Kern County Baseline Greenhouse Gas Emissions***). The 2020 forecasted GHG emissions inventory was estimated to be 27 MMTCO₂e per year, of which the Electricity Consumption sector represents 31% followed by the Fossil Fuel Industry sector at 26% (SJVAPCD 2012).

As discussed under **Impact 4.8-1**, project annual GHG emissions are estimated to be 1,091,855.7 MTCO₂e per year, resulting in a 463 MTCO₂e per year net increase above baseline GHG emissions which is well below the EKAPCD significance threshold of 25,000 MTCO₂e per year. Plans considered in this analysis include the Kern COG 2022 RTP/SCS and the CARB 2022 Climate Change Scoping Plan. As discussed under **Impact 4.8-2**, the project would not conflict with either of these plans.

Thus, the project would not have a significant project-specific or cumulative impact associated with GHG emissions.

Mitigation Measures

Mitigation is not required.

Level of Significance After Mitigation

Impacts would be less than significant.

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Section 4.9

Hazards and Hazardous Materials

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Hazards and Hazardous Materials

4.9.1 Introduction

This section of the Environmental Impact Report (EIR) describes the potential hazards (other than geologic hazards) associated with the project site, infrastructure, activities, and materials that could affect human health and the environment. Analysis in this section is based on information from the U.S. Department of Health and Human Services, California Department of Public Health, Kern County Planning and Natural Resources Department, the *Kern County Multi-Hazard Mitigation Plan* (Kern County 2020). This assessment is based on an evaluation of onsite and adjacent land conditions, including consideration of information in the *Phase I Environmental Site Assessment – CalPortland Cement Company* (Phase I ESA) prepared for the portion of the project site consisting of the approximately 2,852 acres (Phase I ESA Study Area) of the project proponent's vested facility proposed to be added to the reclamation plan (Sespe Consulting 2022), included as **Appendix H** to this EIR.

Air pollutant emissions and associated health effects, including public exposure to Valley Fever spores are discussed in **Section 4.2**, *Air Quality*; impacts associated with geologic and seismic hazards are evaluated in **Section 4.7**, *Geology and Soils*; and impacts associated with flood hazards are discussed in **Section 4.10**, *Hydrology and Water Quality*, of this EIR.

4.9.2 Environmental Setting

The proposed project is located in an unincorporated area of the southeastern part of Kern County, approximately 6 miles southeast of the City of Tehachapi and 7.25 miles west of the unincorporated community of Mojave (**Figure 3-1**, *Site Vicinity*).

The proposed project site is located in the Mojave Desert on the southeastern edge of the Tehachapi Mountains. The elevation of the project area ranges from approximately 3,420 to 6,085 feet above mean sea level (amsl). Oak Creek Road runs east-west along the project site's northern boundary. Tehachapi Willow Springs Road runs north-south along the northern portion of the project site's western boundary and bisects the southwestern portion of the project site.

The surrounding land uses consist of open space, dispersed rural residences, renewable energy generation (i.e., wind turbines and solar facilities), and other mining and industrial uses. Sensitive receptors located in the project area consist of rural residential dwellings located at varying distances from the proposed project site. The nearest identified sensitive receptors are a residence located 5,400 feet south of the project site west of Tehachapi Willow Springs Road, a residence located approximately 5,500 feet northwest of the project site adjacent to Tehachapi Willow Springs Road, a residence located approximately 6,450 feet north of the project site adjacent to Cameron Canyon Road, and residence/commercial facility located approximately 7,400 feet south of the project site west of Tehachapi Willow Springs Road. An approximately

40-acre parcel of land under federal ownership administered by the U.S. Bureau of Land Management (BLM) is located centrally within the exterior boundaries of the project site, however it is not part of the project site. Nothing about the BLM access rights to their aforementioned parcel (the northeast quarter of the northwest quarter of Township 11 North, Range 14 West (T11N, R14W), San Bernardino Base and Meridian (SBB&M)) will be changed because of the proposed project.

Regional Public Health and Hazardous Materials and Waste Sites

The Phase I ESA (Sespe 2022) included a search of Federal, State, and local databases for the Phase I ESA Study Area to identify areas of current and historical release of hazardous materials, as well as locations that use, store, and/or dispose of these materials. The following sources were reviewed for public health and hazardous materials sites in the vicinity of the project site (Sespe 2022):

- National Priorities List (NPL)
- Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)
- CERCLIS – No Further Remedial Action Planned (CERCLIS - NFRAP)
- Emergency Response Notification System (ERNS)
- RCRIS Corrective Action Report (CORRACTS)
- RCRIS Treatment, Storage, Disposal Facilities (TSDF)
- RCRIS Large & Small Quantity Generators (LQG/SQG)
- Engineering Controls Sites List (US ENG Controls)/Institutional Controls Sites List (US INST Controls)
- State/Tribal Hazardous Waste Site
- State/Tribal Brownfields
- Hazardous Waste and Substances Sites List – Cal/EPA (CORTESE)
- State/Tribal Landfill (SWIS)
- RWQCB – Leaking Underground Storage Tank List (LUST)
- RWQCB – Spills, Leaks, Investigations & Cleanups List (SLIC)
- RWQCB- Solid Waste Assessment Test (SWAT)
- Cal/EPA Department of Toxic Substances Control (DTSC) – Contaminated or Potentially Contaminated Hazardous Waste Sites (ENVIROSTOR)
- State/Tribal/Local Registered Underground Storage Tanks (USTs)
- Cal/EPA DTSC – Hazardous Waste Information System (HAZNET)
- California Hazardous Material Incident Report System (CHMIRS)

- State/Tribal Institutional Controls/Engineering Controls (IC/EC)

The Phase I ESA noted that the CalPortland Mojave Cement Plant was identified as a permitted land disposal site and that records under the GeoTracker website are extensive, but that this history is located outside of the Phase I ESA Study Area (Sespe Consulting 2022). The CalPortland Cement Plant site address, 9350 Oak Creek Road, was identified on numerous databases including; above-ground storage tank (AST), California Accidental Release Prevention (CALARP), Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) No Further Action (CERCLIS-NFRAP), land disposal sites (LDS), California Integrated Water Quality System (CIWQS), EMI/TRIS (air emissions), HAZNET, Manifest EPA, CHMIRS (spills), underground storage tanks (UST), Mines Master Index File (MINES), and various other EPA tracking databases (CalEPA, ECHO, FRS, PCS, PWS, etc.). None of these listings, however, relate to the Phase I ESA Study Area as they reflect off site operations within the plant areas (Sespe 2022). Other than the CalPortland improved plant and building areas that are not part of the Phase I ESA Study Area, no potentially significant adjacent properties were identified (Sespe Consulting 2022).

Hazardous Materials and Waste

A hazardous material is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health and the environment. Under California Code of Regulations (CCR) Title 22, the term “hazardous substance” refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: (1) toxicity, (2) ignitability, (3) corrosiveness, and (4) reactivity (22 CCR Chapter 11 and Article 3). A hazardous material is defined in 22 CCR Section 66260.10 as:

A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

Hazardous materials in various forms can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazards to human health and the environment can occur during production, storage, transportation, use, or disposal of hazardous materials.

Available aerial imagery dating back to 1956 was reviewed. Also to gather information that may be material to identifying recognized environmental conditions during preparation of the Phase I Site Assessment, CalPortland Company staff filled out a copy of the ASTM User Questionnaire, and reported that CalPortland Company has owned and operated the facility for over 60 years, that they have knowledge of their property, but no knowledge of the uses of adjoining properties, and that the area has been held as mineral reserves for the facility’s cement plant since the 1950s (Sespe Consulting 2022).

According to the Phase I ESA (Sespe Consulting 2022), surrounding listed properties with contamination problems that pose a significant threat to the site would be those properties that:

- Are located immediately adjacent to the site,
- Have a known or potential groundwater contamination problem and are located upgradient and near the site, or
- By their size or nature pose a threat to a large area (i.e., landfills, Superfund Sites, etc.).

Table 4.9-1, *Summary of Listed Properties Adjacent to the Phase I ESA Study Area*, lists the total number of sites found within the search radius based on the above criteria.

Table 4.9-1 Summary of Listed Properties Adjacent to the Phase I ESA Study Area

Database	Search Distance (miles from Phase I ESA Study Area)	Total Properties Identified	Potentially Significant Listed Adjacent Properties
National Priorities List (NPL)	1.0	0	None
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	0.50	0	None
CERCLIS – No Further Remedial Action Planned (CERCLIS - NFRAP)	0.50	1	CalPortland, 9350 Oak Creek Road (site).
Emergency Response Notification System (ERNS)	Phase I ESA Study Area	1	None
RCRIS Corrective Action Report (CORRACTS)	1.0	0	None
RCRIS Treatment, Storage, Disposal Facilities (TSDF)	0.50	0	None
RCRIS Large & Small Quantity Generators (LQG/SQG)	0.125	0/0	None
Engineering Controls Sites List (US ENG Controls)/Institutional Controls Sites List (US INST Controls)	0.125	0/0	None
State/Tribal Hazardous Waste Site	1.0	0	None
State/Tribal Brownfields	0.50	0	None
Hazardous Waste and Substances Sites List – Cal/EPA (CORTESE)	0.50	0	None
State/Tribal Landfill (SWIS)	0.50	0	None
RWQCB – Leaking Underground Storage Tank List (LUST)	0.50	0	None
RWQCB – Spills, Leaks, Investigations & Cleanups List (SLIC)	0.50	0	None
RWQCB- Solid Waste Assessment Test (SWAT)	0.50	0	None
Cal/EPA DTSC – Contaminated or Potentially Contaminated Hazardous Waste Sites (ENVIROSTOR)	0.50	0	None

Table 4.9-1 Summary of Listed Properties Adjacent to the Phase I ESA Study Area

Database	Search Distance (miles from Phase I ESA Study Area)	Total Properties Identified	Potentially Significant Listed Adjacent Properties
State/Tribal/Local Registered Underground Storage Tanks (USTs)	0.125	1	CalPortland, 9350 Oak Creek Road (site).
Cal/EPA DTSC – Hazardous Waste Information System (HAZNET)	Phase I ESA Study Area	1	CalPortland, 9350 Oak Creek Road (site).
State/Tribal Institutional Controls/Engineering Controls (IC/EC)	Phase I ESA Study Area	0	None.

Source: Sespe Consulting 2022, Table 6.2.1 and Table 6.2.2.

Other than the CalPortland improved plant and building areas at 9350 Oak Creek Road that are mentioned above and not part of the Phase I ESA investigation, no potentially significant adjacent properties were identified (Sespe Consulting 2022).

Disease Vectors

A disease vector is an insect or animal that carries a disease-producing micro-organism from one host to another. The Federal Insecticide, Fungicide and Rodenticide Act defines the term vector as “...any organism capable of transmitting the causative agent of human disease or capable of producing human discomfort or injury, including mosquitoes, flies, fleas, cockroaches, or other insects and ticks, mites or rats.” The accumulation of organic wastes would act as attractors for various vectors. In addition, any depressed areas, ponds, or drainage channels would provide areas for the breeding of mosquitoes.

Mosquitoes

Mosquitoes are of particular concern because of their abundance and distribution. In Kern County, mosquitoes are most abundant and active between May and October. Mosquitoes require standing water to breed and can be prolific in areas with standing water, such as wetlands.

Adult female mosquitoes can deposit eggs in a variety of aquatic habitats and other sources that contain water. The immature stages of each mosquito species develop in particular habitats. In general, there are four mosquito habitat groups: agricultural, industrial, domestic, and natural sources. Typical sites within these habitat groups include:

- **Agricultural Sources:** irrigated pastures, dairies, and orchards.
- **Industrial Sources:** sewage treatment ponds, flood plains, and drain ditches.
- **Domestic Sources:** containers, debris in and around ponds, bird baths, pet watering dishes, animal troughs, septic tanks, catch basins, roadside ditches, leaky sprinkler systems, and stagnant swimming pools.
- **Natural Sources:** wetlands and rain pools.

All species of mosquitoes require standing water to complete their growth cycle. Therefore, any standing body of water represents a potential mosquito breeding habitat. Although mosquitoes will typically stay close to suitable breeding habitat and blood-meal hosts, they are known to travel up to 10 miles under breezy conditions. The breeding period for mosquitoes depends on temperature but generally occurs in March through October.

Water quality also affects mosquito reproduction. Generally, poor-quality water (e.g., water with limited circulation, high temperature, high organic content) produces greater numbers of mosquitoes than high-quality water (e.g., water with high circulation, low temperature, low organic content). Typically, water bodies with water levels that slowly increase or recede produce greater numbers of mosquitoes than waterbodies with water levels that are stable or that rapidly fluctuate.

The project site is not located within a mosquito or vector control district.

Rodents

The accumulation of organic waste presents the potential for significant populations of mice and rats. Rodents can spread or accelerate the spread of disease from contaminated areas to uncontaminated areas via their droppings, feet, fur, urine, saliva, or blood. In addition, mice provide a food source that could attract wild predatory animals (e.g., skunks, foxes, coyotes, stray dogs), which could pose other disease problems. The site and surrounding areas do not contain land uses that accumulate organic waste.

Valley Fever

Coccidioidomycosis, commonly known as Valley Fever, is primarily a disease of the lungs that is common in the southwestern United States and northwestern Mexico. The disease is of critical concern to Kern County. Valley Fever is caused by the fungus *Coccidioides immitis*, which grows in soils in areas of low rainfall, high summer temperatures, and moderate winter temperatures. These fungal spores become airborne when the soil is disturbed by winds, construction, farming, and other activities. In susceptible people and animals, infection occurs when a spore is inhaled. Valley Fever symptoms generally occur within 3 weeks of exposure. Valley Fever is not a contagious disease, and secondary infections are rare.

It is estimated that more than 4 million people live in areas where Valley Fever fungus is prevalent in the soils. Residents of Bakersfield, California, and Phoenix, Arizona, have shown positive skin-test reaction rates of 30–40%, meaning that about one-third of residents tested have had Valley Fever sometime in the past. Among those who have never had Valley Fever, the chance of infection is about 3% per year, but the longer one resides in an endemic area, the greater the risk. In the southwestern United States, there are 100,000 new infections each year.

People working in certain occupations such as construction, agriculture, and archaeology have an increased risk of exposure and disease because these jobs result in the disturbance of soils where fungal spores are found. Valley Fever infection is highest in California from June to November. In addition, many domestic and native animals are susceptible to the disease, including dogs, horses, cattle, coyotes, rodents, bats, and snakes. Most Valley Fever cases are very mild. It is estimated that 60% or more of infected people either have no symptoms or experience flu-like symptoms and never seek medical attention.

Wildfire

The behavior and characteristics of wildfires depend on several biophysical and anthropogenic (human-caused) factors. The biophysical variables are fuels (including composition, cover, and moisture content), weather conditions (particularly wind velocity and humidity), topography (slope and aspect), and ignitions (e.g., lightning). The anthropogenic variables are ignitions (e.g., arson, smoking, power lines) and management (wildfire prevention and suppression efforts).

Vegetation with low-moisture content is more susceptible to ignitions and burns more readily than vegetation with higher moisture content. Grasses tend to ignite more easily, burn faster, and burn for a shorter duration than woody vegetation, such as shrubs and trees. Continuity of fuels helps sustain wildland fires. High winds provide oxygen to wildfires and can also blow glowing embers of vegetation far ahead of the front of a fire, allowing fires to jump fuel breaks in some cases. Conditions of low relative humidity dry out fuels, increasing the likelihood of ignition and rate of fire spreading.

The project site includes approximately 1,161.5 acres of disturbed land that has been previously cleared for mining and cement plant operations and related activities and approximately 345.5 acres of lands burned during wildfires in 2006 and 2011 that are revegetating but with currently undetermined plant communities. Plant communities identified within the project site consist of approximately 1,611 acres of California Juniper Woodland, approximately 950 acres of Mojave Desert Scrub, approximately 12 acres of oak woodland, approximately 287 acres of Joshua Tree Woodland. Additionally, fifteen ephemeral drainage channels have been delineated within the project site, composing a total of approximately 19.15 acres (within the mapped vegetation communities), some of which support riparian habitat (RCA 2025, ELMT 2025).

Portions of the project site are located within areas of Kern County designated by the California Department of Forestry and Fire Protection (CAL FIRE) as having either “Moderate”, “High” or “Very High” Fire Hazard Severity Zones (FHSZ) in State Responsibility Areas (SRA) as shown on **Figure 4.18-1, Fire Hazard Severity Zones for State Responsibility Areas**. The entirety of the project site is also located within Local Responsibility Area (LRA) with FHSZ ratings of “Moderate”, “High” or “Very High” (Sespe 2025c). Fire protection and prevention services are further discussed in **Section 4.13, Public Services**, and vegetation, fire conditions, and potential impacts are further discussed in **Section 4.18, Wildfire**, of this EIR.

4.9.3 Regulatory Setting

Federal

U.S. Environmental Protection Agency

The USEPA was established in 1970 to consolidate in one agency a variety of Federal research, monitoring, standard-setting, and enforcement activities to ensure environmental protection. The USEPA’s mission is to protect human health and to safeguard the natural environment—air, water, and land—upon which life depends. The EPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and

delegates to States and Tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Where national standards are not met, the EPA can issue sanctions and take other steps to assist the States and Tribes in reaching the desired levels of environmental quality.

Federal Toxic Substances Control Act/Resource Conservation and Recovery

The Federal Toxic Substances Control Act of 1976 and Resource Conservation and Recovery Act (RCRA) of 1976 established a USEPA-administered program to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes. The State Hazardous Waste Management Program, a more stringent version of the Federal RCRA program, is described in detail below.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act

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

Clean Water Act Spill, Prevention, Control, and Countermeasure Rule

The Clean Water Act (CWA) (33 USC 1251 et seq., formerly the Federal Water Pollution Control Act of 1972) was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of waters of the United States. As part of the CWA, the USEPA oversees and enforces the Oil Pollution Prevention regulation contained in 40 CFR 112, which is often referred to as the “SPCC rule” because the regulations describe the requirements for facilities to prepare, amend, and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans. A facility is subject to SPCC regulations if the total aboveground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the “Navigable Waters” of the United States.

Other Regulations

Other federal regulations overseen by the USEPA relevant to hazardous materials and environmental contamination include 40 CFR Parts 100 to 149, Water Programs; 40 CFR Parts

239–259, Solid Wastes; and 40 CFR Parts 260–279, Hazardous Waste. These regulations designate hazardous substances under the Federal Water Pollution Control Act, determine the reportable quantity for each substance that is designated as hazardous, and establish quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

Occupational Safety and Health Administration

The mission of the Occupational Safety and Health Administration (OSHA) is to ensure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA staff establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR Part 1910, which include preparation of Health and Safety Plans (HASPs). HASPs identify potential hazards associated with a proposed land use and may provide appropriate mitigation measures as required.

Per 29 CFR Section 1910.120(e), all employees working onsite exposed to hazardous substances, health hazards, or safety hazards and their supervisors and management responsible for the site are required to receive training meeting the requirements of this paragraph before they are permitted to engage in hazardous waste operations that could expose them to hazardous substances, safety, or health hazards. These employees shall receive any necessary review training.

Mine Safety and Health Administration

The Mine Safety and Health Administration (MSHA) is an agency of the U.S. Department of Labor that administers the Federal Mine Safety and Health Act of 1977 to enforce compliance with mandatory safety and health standards as a means to promote improved safety and health conditions at mining and mineral processing operations in the United States.

National Weather Service

Under extreme fire weather conditions, the National Weather Service (NWS) issues Red Flag Warnings for all affected areas. A Red Flag Warning means that any ignition could result in a large-scale damaging wildfire. The project is located in the Los Angeles/Oxnard NWS region. Red Flag Warning criteria for the Los Angeles/Oxnard region consists of, for all zones except the Antelope Valley, dry fuels plus any one of the following: (1) relative humidity 15% or less with either sustained winds of 25 miles per hour (mph) or greater, or frequent gusts of 35 mph or greater (for a duration of 6 hours or more); (2) relative humidity 10% or less for an extended period of time (for a duration of 10 hours or more); or (3) widespread and/or significant dry lightning. For the Antelope Valley, criteria consist of dry fuels plus relative humidity 15% or less with sustained winds of 25 mph (for a duration of 8 hours or more).

State

California Department of Conservation Geologic Energy Management Division

CalGEM is a State agency that is responsible for supervising the drilling, operation, maintenance, plugging, and abandonment of oil, gas, and geothermal wells. CalGEM's regulatory program promotes the sensitive development of oil, natural gas, and geothermal resources in California through sound engineering practices, pollution prevention, and the implementation of public safety programs. CalGEM requires any construction above or near plugged or abandoned oil and gas wells to be avoided, and remediation of wells to meet current CalGEM standards, including wells discovered during excavation or grading.

California Public Resources Code (PRC) Section 3208.1 authorizes the State Oil and Gas Supervisor of CalGEM to order the re-abandonment of a previously abandoned well when construction of any structure over or near a well could result in a hazard. The cost of re-abandonment operations is the responsibility of the owner or developer of a project upon which the structure would be located.

California Environmental Protection Agency

The CalEPA has primary oversight of the State's hazardous waste management programs. State regulations require planning and management to ensure that hazardous wastes are handled, stored, and disposed of properly to reduce risks to human and environmental health. Applicable State and local laws include the:

- Public Safety/Fire Regulations/Building Codes;
- Hazardous Waste Control Law;
- Hazardous Substances Information and Training Act;
- Air Toxics Hot Spots and Emissions Inventory Law;
- Underground Storage of Hazardous Substances Act; and
- Porter-Cologne Water Quality Control Act.

Hazardous Materials Release Response Plans and Inventory Act of 1985

The Hazardous Materials Release Response Plans and Inventory Act of 1985, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs. Hazardous materials are defined as unsafe raw or unused materials that are part of a process or manufacturing step. They are not considered hazardous waste. Health concerns pertaining to the release of hazardous materials, however, are similar to those relating to hazardous waste.

Hazardous Waste Control Act

The Hazardous Waste Control Act (HWCA) created the State hazardous waste management program, which is similar to but more stringent than the Federal RCRA program. The act is implemented by regulations contained in CCR Title 26, which describes the following required aspects for the proper management of hazardous waste:

- identification and classification;
- generation and transportation;
- design and permitting of recycling, treatment, storage, and disposal facilities;
- treatment standards;
- operation of facilities and staff training; and
- closure of facilities and liability requirements.

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the HWCA and CCR Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with the DTSC.

Department of Toxic Substances Control

Within CalEPA, the DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the HWCA.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

Senate Bill (SB) 1082, introduced by Senator Charles Calderon (D-Whittier) and passed in 1993, created the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), which requires the administrative consolidation of six hazardous materials and waste programs (Program Elements) under one agency, a Certified Unified Program Agency (CUPA). The Program Elements consolidated under the Unified Program are:

- Hazardous Waste Generator and On-site Hazardous Waste Treatment Programs (a.k.a., Tiered Permitting);
- Aboveground Petroleum Storage Tank Spill Prevention Control and Countermeasure Plan;
- Hazardous Materials Release Response Plans and Inventory Program (also known as Hazardous Materials Disclosure or “Community-Right-To-Know”);
- California Accidental Release Prevention Program;
- Underground Storage Tank Program; and
- Uniform Fire Code Plans and Inventory Requirements.

The Unified Program is intended to provide relief to businesses complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs. The Unified Program is implemented at the local government level by CUPAs. Most CUPAs have been established as a function of a local environmental health or fire department. Some CUPAs have contractual agreements with another local agency, a participating agency, which

implements one or more Program Elements in coordination with the CUPA. The Office of the State Fire Marshal participates in all levels of the CUPA program, including regulatory oversight, CUPA certifications, evaluations of the approved CUPAs, training, and education.

California Office of Emergency Services

To protect the public health and safety and the environment, the California Office of Emergency Services (OES) is responsible for establishing and managing Statewide standards for business and area plans relating to the handling and release or threatened release of hazardous materials. Basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and the health risks) needs to be available to firefighters, public safety officers, and regulatory agencies, and needs to be included in business plans in order to prevent or mitigate the damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment. These regulations are covered under Chapter 6.95 of the California Health and Safety Code Article 1, Hazardous Materials Release Response and Inventory Program (Sections 25500–25520), and Article 2, Hazardous Materials Management (Sections 25531–25543.3).

Minimum Statewide standards for Hazardous Materials Business Plans (HMBPs) are established in 19 CCR, Public Safety, Division 2, OES, Chapter 4, Hazardous Material Release Reporting, Inventory, and Response Plans, Article 4 (Minimum Standards for Business Plans). These plans shall include the following:

1. a hazardous material inventory in accordance with Sections 2729.2–2729.7;
2. emergency response plans and procedures in accordance with Section 2731; and
3. training program information in accordance with Section 2732.

Business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the State. Each business shall prepare a HMBP if that business uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to the following: 500 pounds of a solid substance, 55 gallons of a liquid, 200 cubic feet of compressed gas, a hazardous compressed gas in any amount, or hazardous waste in any quantity.

California Occupational Safety and Health Administration

California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than Federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

California Highway Patrol

A valid Hazardous Materials Transportation License, issued by the California Highway Patrol (CHP), is required by the laws and regulations of California Vehicle Code Section 3200.5 for transportation of either:

- Hazardous materials shipments for which the display of placards is required by State regulations; or
- Hazardous materials shipments of more than 500 pounds, which would require placards if shipping greater amounts in the same manner.

California Emergency Response Plan

California has developed an Emergency Response Plan to coordinate emergency services provided by Federal, State, and local government and private agencies. Response to hazardous materials incidents is one part of this plan. The plan is managed by the OES, which coordinates the responses of other agencies including the CalEPA, CHP, California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), Kern County Sheriff's Department, and Kern County Fire Department (KCFD).

Local

Kern County General Plan

The project site is located within the *Kern County General Plan* and the *Cameron Canyon Specific Plan*. The policies, goals, and implementation measures in the *Kern County General Plan* and the *Cameron Canyon Specific Plan* relevant to hazards and hazardous materials that are applicable to the project are provided below.

Chapter 4. Safety Element

4.1 Introduction

Goals

- **Goal 1.** Minimize injuries and loss of life and reduce property damage.
- **Goal 2.** Reduce economic and social disruption resulting from earthquakes, fire, flooding, and other geologic hazards by assuring the continuity of vital emergency public services and functions.
- **Goal 4.** Create an awareness of the residents in Kern County through the dissemination of information about geologic, fire, and flood safety hazards.
- **Goal 5.** Ensure the availability and effective response of emergency services following a catastrophic event.
- **Goal 7.** Ensure that adequate emergency services and facilities are available to the residents of Kern County through the coordination of planning and development of emergency facilities and services.

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

Policies

- **Policy 1.** That the County's program of identification, mapping, and evaluating the geologic, fire, flood safety hazard areas, and significant concentrations of hydrogen sulfide in oilfield areas, presently under way by various County departments, be continued.
- **Policy 2.** Those hazardous areas, identified as unsuitable for human occupancy, are guided toward open space uses, such as agriculture, wildlife habitat, and limited recreation.
- **Policy 3.** That the County government encourage public support of local, State, and Federal research programs on geologic, fire, flood hazards, valley fever, plague, and other studies so that acceptable risk may be continually reevaluated and kept current with contemporary values.

Implementation Measures

- **Implementation Measure A.** All hazards (geologic, fire, and flood) should be considered whenever a Planning Commission or Board of Supervisor's action could involve the establishment of a land use activity susceptible to such hazards.
- **Implementation Measure C.** Require detailed site studies for ground shaking characteristics, liquefaction potential, dam failure inundation, flooding potential, and fault rupture potential as background to the design process for critical facilities under County discretionary approval.

4.6 Wildland and Urban Fire

Hazard Identification

- **Access and Evacuation Routes.** Good planning principles, as well as existing policies and laws, dictate that all developments must be planned with circulation routes that will assure safe access for fire and other emergency equipment. The circulation routes must include secondary means of ingress and egress, consistent with topography, to meet emergency needs.

The general circulation routes are provided throughout the County by Federal, State, and County-maintained road systems which are adequate for access and evacuation. State and County laws regulate the standards for new public circulation routes.

Private circulation routes that are not maintained by the State or County are subject to the standards set forth in Kern County Ordinance No. G-1832.

- **Clearance of Vegetative Cover for Fire Control.** In 1963 the State of California enacted the Public Resources Code clearance law. This is a minimum Statewide clearance law of flammable vegetative growth around structures, especially in brush- and tree-covered watershed areas. The enactment of a local ordinance is necessary where more restrictive fire safety clearance measures are desirable to meet local conditions.

- **Fuel Breaks and Firebreaks.** Fuel breaks and/or firebreaks separating communities or clusters of structures from the native vegetation may be required. Such fuel breaks may be “greenbelts,” as all vegetation need not be removed but thinned or landscaped to reduce the volume of fuel.

All fuel and firebreaks are required to meet the minimum design standards of the Kern County Fire Chief.

The Fire Department’s Chief may require a fire plan for a development during the critical fire season. This plan should reflect the proposed course of action for fire prevention and suppression.

The parcel size and setback distances of buildings placed thereon should be such that adequate clearance of flammable vegetation cover may be performed within the limits of the owner’s parcel of land.

Should the owner of a property fail to apply the required firebreak clearance, following proper notice, the County may elect to clear the firebreak vegetation and make the expense of the clearing a lien against the property upon which the work was accomplished.

- **Hazardous Fire Area.** The Hazardous Fire Areas consists mainly of wildlands, which are mountain and hill land in an uncultivated, more or less natural state, covered with timber, wood, brush, and grasslands. This area includes some urban influence and agricultural use, such as exists around Isabella Lake and the Kern River, Woody/Glennville, Tehachapi/Cummings Valley, and Lebec/Frazier Park/Lake of the Woods.

The wildlands provide prime habitats for deer, mountain lions, bears, kit foxes, quail, chucker, wild turkeys, and condors. They also harbor fifteen identified and important rare botanic communities and vegetation associations.

The Kern County Hazardous Fire Area was established by an amendment to the Uniform Fire Code, Section 1.49H under Section 4016 of the Kern County Ordinance Code.

The boundaries of the Hazardous Fire Area are determined and publicly announced before the start of each annual “fire season” and is normally the period from April 15 to December 1 of each year, except when the Fire Chief extends this period.

The wildlands include valuable watersheds that must be preserved for receiving and passing water into surface streams and underground storage. Protection of the watersheds will prevent erosion and flood damages.

For the protection of our wildlands we must consider all factors which will aid in fulfilling the policy stated in the California Environmental Quality Act, Public Resources Code Section 21000 et seq., to “create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations.”

In implementing their Fire Prevention Program, Fire Department personnel periodically inspect the areas around all buildings for accumulations of flammable material and closure of openings of vacant buildings.

Policies

- **Policy 1.** Require discretionary projects to assess impacts on emergency services and facilities.
- **Policy 2.** The County will encourage the promotion of public education about fire safety at home and in the workplace.
- **Policy 3.** The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.
- **Policy 4.** Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.
- **Policy 5.** Require that all roads in wildland fire areas are well marked and that homes have addresses prominently displayed.
- **Policy 6.** All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.

Implementation Measures

- **Implementation Measure A.** Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

Cameron Canyon Specific Plan

Section X. Seismic Safety and Safety Element

Goals

- **Goal 2.** To reduce economic and social disruption resulting from earthquakes, fire, flooding, and other geologic hazards by assuring the continuity of vital services and functions.
- **Goal 3.** To assist in the allocation of public resources in Kern County to develop information regarding geologic, fire, and flood safety hazards and to develop a systematic approach toward the protection of public health, safety, and welfare from such hazards.

Policies

- **Policy 1.** Constrained areas will be guided toward open space uses, such as rangeland and watershed use.
- **Policy 2.** Areas of potential natural hazard will be identified on the plan by applicable constraint overlays.

Implementation Standards

- **Implementation Standard 1.** Development shall be subject to the standards of the Uniform Building Code (UBC), Uniform Fire Code (UFC), and Uniform Plumbing Code (UPC) as adopted by Kern County.
- **Implementation Standard 3.** The “Implementation Recommendations” of the Kern County Safety and Seismic Safety Element are hereby incorporated by reference as requirements.

Kern County Wildland Fire Management

The Kern County Fire Department submits a unit Annual Strategic Fire Plan to CAL FIRE and it is posted on their Office of the State Fire Marshall website (<https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/pre-fire-planning>). The Annual Strategic Fire plan accomplishes the mission of the Kern County Fire Department (KCFD) by collecting and sharing information related to wildfire risk and response. This helps safeguard people, protect property, infrastructure, cultural heritage, and resources of Kern County.

Kern County also has a Community Wildfire Protection Plan (CWPP) that was updated in 2022 and covers the entirety of Kern County (https://kerncountyfire.org/wp-content/uploads/Kern-CWPP_final_combined_11March2022.pdf). The CWPP addresses hazards and risks of wildland fire throughout Kern County and makes recommendations for fuel reduction projects, public outreach and education, structural ignitability reduction, and fire response capabilities.

Kern County Multi-Hazard Mitigation Plan

The purpose of hazard mitigation and *Kern County Multi-Hazard Mitigation Plan* is to reduce or eliminate long-term risk to people and property from natural hazards and their effects in Kern County. This plan has been prepared to meet the requirements of the Disaster Mitigation Act of 2000. The plan and planning process lay out the strategy that will enable Kern County to become less vulnerable to future disaster losses. The plan underwent a comprehensive update in 2011–2012 and was subsequently updated in 2020 (Kern County 2020).

Kern County and Incorporated Cities Hazardous Waste Management Plan

In response to the growing public concern regarding hazardous waste management, Assembly Bill (AB) 2948 enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within the local government’s jurisdiction.

The *Kern County and Incorporated Cities Hazardous Waste Management Plan* (Hazardous Waste Plan) was first adopted by Kern County and each incorporated City before September 1988 and was subsequently approved by the State Department of Health Services (Kern County 1991). The Hazardous Waste Plan was updated and incorporated by reference into the *Kern County General Plan* in 2004 as permitted by California Health and Safety Code Section 25135.7(b), and thus must be consistent with all other aspects of the *Kern County General Plan*.

The Hazardous Waste Plan provides policy direction and action programs to address current and future hazardous waste management issues that require local responsibility and involvement in Kern County. In addition, the Hazardous Waste Plan discusses hazardous waste issues and analyzes current and future waste generation in the incorporated Federal, State, County, and City lands. The purpose of the Hazardous Waste Plan is to coordinate local implementation of a regional action to effect comprehensive hazardous waste management throughout Kern County. The action program focuses on development of programs to equitably site needed hazardous waste management facilities; to promote onsite source reduction, treatment, and recycling; and to provide for the collection and treatment of small quantity hazardous waste generators. An important component of the Hazardous Waste Plan is the monitoring of hazardous waste management facilities to ensure compliance with Federal and State hazardous waste regulations. The siting criteria and any subsequent environmental documentation required pursuant to the California Environmental Quality Act (CEQA) would also ensure the mitigation of adverse impacts associated with the siting of any new hazardous waste facility.

Kern County Ordinance

Ordinance No. G-1832

Kern County Ordinance No. G-1832 dictates ingress and egress standards that allow access for fire apparatus. These design standards are enforced within the Hazardous Fire Area during the fire season.

Fuel breaks and/or fire breaks separating communities or clusters of structures from the native vegetation may be required. Such fuel breaks may be “greenbelts,” as all vegetation need not be removed but rather thinned or landscaped to reduce the volume of fuel. All fuel and firebreaks shall meet the minimum design standards of the fire chief including the Maintenance of Defensible Space requirements of the Wildland-Urban Interface (WUI) Code, as follows:

- A firebreak shall consist of a strip, a minimum of 10 feet wide, cleared to mineral soil on each side of a road, or a width determined by the fire chief to be adequate for the general terrain and type of groundcover.
- Firebreaks are not to be used as roads, parking areas, or storage areas.
- All easements for fuel breaks for fire safety of built-up areas shall encompass access for firefighting personnel and equipment, which may mean motorized travel in some cases; such easements shall be dedicated for this specific purpose to an entity composed of the property owners. The property owners shall be charged with the maintenance of such easements.

4.9.4 Impacts and Mitigation Measures

This section analyzes the impacts associated with implementation of the project related to the risk of upset due to potential hazardous substances, including hazardous materials and/or hazardous waste within the project site and the vicinity, as well as other hazards to public safety. The impact analysis describes the methods used to determine the project’s impacts and lists the thresholds used to conclude the significance of an impact. Measures to mitigate (avoid,

minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, as appropriate.

Methodology

This assessment is based on an evaluation of onsite and adjacent land conditions, including consideration of information in the *Phase I Environmental Site Assessment – CalPortland Cement Company* (Phase I ESA) prepared for the portion of the project site consisting of the approximately 2,852 acres (Phase I ESA Study Area) of the project proponent's vested facility proposed to be added to the reclamation plan (Sespe Consulting 2022), included as **Appendix H** to this EIR, and the likelihood or ability of these conditions to affect components of the proposed project. This assessment included:

- Site reconnaissance,
- Interviews,
- Review of previous assessments,
- Review of readily available literature, maps and aerial photographs, and historic documentation for the project site,
- Review of regulatory agency databases, and
- Review of title records and environmental liens.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect related to hazards and hazardous materials. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to hazards and hazardous materials if it would:

- a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school;
- d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- e. For a project located within the adopted Kern County Airport Land Use Compatibility Plan, result in a safety hazard or excessive noise for people residing or working in the project area;

- f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan;
- g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires; and
- h. Generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste. Specifically, if it would exceed the following qualitative threshold:

The presence of domestic flies, mosquitoes, cockroaches, rodents, and/or any other vectors associated with the project is significant when the applicable enforcement agency determines that any of the vectors:

 - i. Occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and
 - ii. Are associated with design, layout, and management of project operations; and
 - iii. Disseminate widely from the property; and
 - iv. Cause detrimental effects on the public health or well-being of the majority of the surrounding population.

Project Impacts

Impact 4.9-1: The project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

The project would include the transport and use of flammable and other hazardous materials, such as diesel fuels. The transportation of hazardous materials is heavily regulated by both Federal and State agencies (see **Section 4.9.3, Regulatory Setting**). Enforcement of hazardous materials transport regulations is primarily the responsibility of the CHP when transport occurs on the State highway system; however, this analysis reasonably assumes that such materials would be transported in accordance with applicable regulations. Before any such materials are transported, the carrier must obtain a Hazardous Materials Transportation License (either temporary or otherwise) from the CHP. As part of that licensing process, the carrier's equipment and methods would be inspected by the CHP, and the carrier would be informed of the proper routes to and from the project site. In addition to the CHP license, transportation of hazardous materials would be required to follow all applicable Federal and State laws regarding such transport. All hazardous materials at the project would be handled and stored in compliance with the requirements set forth in applicable codes and regulations. The project proponent would store all fuels, oils, solvents, and any other hazardous materials in the manner specified by the manufacturer and in accordance with all applicable Federal, State, and local regulations.

Refueling of off-road equipment (e.g., loader, grader, etc.) will primarily occur at the adjacent cement plant, with the remainder consisting of mobile refueling. However, in the event that a spill of hazardous or regulated material occurs, such as diesel fuel, measures are proposed to be taken to control and clean up the spill, and notifications will be made to the appropriate landowners and applicable agencies as indicated in the facility Spill Prevention Control and Countermeasure Plan (SPCC). Site employees and/or onsite contractors currently, and will

continue to, maintain spill kits on site for use in case of a spill. The following existing best management practices (BMPs) and plans are implemented and will continue to be implemented during continued mining and proposed reclamation:

1. Handling of all blasting agents (drilling and blasting would continue to be conducted in conjunction with mining, however no drilling and/or blasting associated with reclamation would be conducted) shall be limited to qualified and licensed blasting contractors at all times and stored only in approved containers, specifically designed for the safekeeping of explosives.
2. Any spillage of petroleum products, fuels, lubricants, or other chemicals shall be immediately cleaned up, and properly disposed of in strict accordance with applicable state and federal regulations.
3. A current inventory of the types and quantities, along with Safety Data Sheets, shall be maintained onsite by qualified personnel. Relevant storage, use, and clean-up information shall be included in the site's pollution prevention plans, including (but not limited to); the Spill Prevention, Control, and Countermeasures (SPCC) Plan, Hazardous Materials Business Plan (HMBP), and Stormwater Pollution Prevention Plan (SWPPP).
4. All refuse generated within the project boundary will be hauled to the cement plant and be disposed of in an enclosed container, then transferred to an authorized off-site landfill facility, consistent with all applicable regulations. No refuse will be left within the project boundary to negatively impact surface water quality.
5. Refueling of off-road equipment (dozer, loader, grader, etc.) will occur at the adjacent cement plant or via mobile fuel truck. Mobile refueling of off-road equipment within the mining area will be subject to the same BMPs and controls.

With implementation of Mitigation Measures **MM 4.9-1** through **MM 4.9-2**, the project's potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials is considered less than significant.

Mitigation Measures

MM 4.9-1 At least 30 days prior to commencement of reclamation activities, the project proponent/operator shall prepare and submit an Emergency Response Plan to the Kern County Fire Department for review and approval, or maintain an Emergency Response Plan approved by the Kern County Fire Department. A copy of the approved Emergency Response Plan shall be submitted to the Kern County Planning and Natural Resources Department to be kept on file.

MM 4.9-2 During the life of the project, including reclamation, the project operator shall maintain and amend as necessary, a Hazardous Materials Business Plan (HMBP), and submit all required information to the California Environmental Reporting System (CERS) at <http://cers.calepa.ca.gov/>. A copy of the HMBP and CERS registration shall be provided to the Kern County Planning and Natural Resources Department.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.9-1** through **MM 4.9-2**, impacts would be less than significant.

Impact 4.9-2: The project would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

As described under **Impact 4.9-1**, operation of the project would require the use, storage, and handling of hazardous materials during the life of the project. Fire, accidental explosions of materials such as gasoline, and spills are some of the potential loss incidents associated with project implementation. In addition, the potential disruption of recorded or potentially unrecorded abandoned or active oil wells on the project site could result in the release of liquid hydrocarbon either at the ground surface or below ground and would be considered a significant impact.

There are no known oil or gas wells located within the project boundary. If any wells are encountered during project activities the property owner is expected to immediately notify the California Department of Conservation Geologic Energy Management Division (CalGEM) construction site well review engineer in the Inland district office and file for CalGEM review of an amended site plan with well casing diagrams.

The project would be required to comply with all Federal, State, and local regulations regarding the storage and use of any hazardous materials onsite, including OSHA, MSHA, and Cal/OSHA standards. With implementation of Mitigation Measures **MM 4.9-1** through **4.9-2** discussed above, the project's potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment is considered low. Mitigation Measures **MM 4.9-3** through **MM 4.9-4** would further reduce the potential for impacts associated with hazardous materials by requiring reporting, identifying, plugging, and avoiding any discovered wells in accordance with applicable CalGEM requirements (**MM 4.9-3**) and by requiring the placement of signage warning of mining and reclamation activities (**MM 4.9-4**). As a result of regulatory compliance and implementation of mitigation measures, this impact is considered less than significant.

Mitigation Measures

Implement Mitigation Measures **MM 4.9-1** through **MM 4.9-2** and the following additional mitigation measures.

MM 4.9-3 The project proponent/operator shall ensure that in the event any abandoned or unrecorded wells are uncovered or damaged during excavation or grading activities, all work shall cease in the vicinity of the well, and the California Department of Conservation Division of Geologic Energy Management Division (CalGEM) shall be contacted for requirements and approval. The CalGEM may determine that remedial plugging operations may be required

and shall be contacted and brought to the project site to make a proper assessment of the suspect materials.

- MM 4.9-4** Prior to commencement of reclamation activities, the project proponent/operator shall install signage, per Kern County signage requirements, warning of mine reclamation operations. Signage design, message and location(s) shall be subject to review by the Kern County Planning and Natural Resources Department prior to installation.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.9-1** through **4.9-4**, impacts would be less than significant.

- Impact 4.9-3: The project would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 1/4 mile of an existing or proposed school.**

The project site is located partially within the Tehachapi Unified School District boundaries, and partially within the Mojave Unified School District boundaries. The nearest schools to the project site are Mojave Jr./Sr. High School and Mojave Elementary School (both approximately 7.5 miles east of the project site in Mojave). Multiple other schools are also located in and around the communities of Mojave, Tehachapi, and Rosamond. As no schools are located within ¼ miles of the project site, this impact would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

- Impact 4.9-4: The project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment.**

A Phase I Environmental Site Assessment – CalPortland Cement Company (Phase I ESA) was prepared by Sespe Consulting, Inc, (Sespe Consulting 2022) for the portion of the project site consisting of the approximately 2,852 acres (Phase I ESA Study Area) of the project proponent's vested facility proposed to be added to the reclamation plan. The Phase I ESA involved records collection and review, database searches, and site reconnaissance to evaluate the Phase I ESA Study Area for evidence of hazardous materials storage and usage, existing signs of contamination, hazardous waste generation, waste disposal activity, and similar environmental concerns (Sespe Consulting 2022).

The Phase I ESA noted that the CalPortland Mojave Cement Plant was identified as a permitted land disposal Site and that records under the GeoTracker website are extensive, but that this

history is located outside of the Phase I ESA Study Area (Sespe Consulting 2022). The CalPortland Cement Plant site address, 9350 Oak Creek Road, was identified on numerous databases including; above-ground storage tank (AST), California Accidental Release Prevention (CALARP), Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) No Further Action (CERCLIS-NFRAP), land disposal sites (LDS), California Integrated Water Quality System (CIWQS), EMI/TRIS (air emissions), HAZNET, Manifest EPA, CHMIRS (spills), underground storage tanks (UST), MINES, and various other EPA tracking databases (CalEPA, ECHO, FRS, PCS, PWS, etc.). None of these listings, however, relate to the Phase I ESA Study Area as they reflect off site operations within the plant areas (Sespe Consulting 2022). Other than the CalPortland improved plant and building areas that are not part of the Phase I ESA Study Area, no potentially significant adjacent properties were identified (Sespe Consulting 2022).

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.9-5: The project would be located within the adopted Kern County Airport Land Use Compatibility Plan and would the project result in a safety hazard or excessive noise for people residing or working in the project area.

The nearest airports to the project site are Mountain Valley Airport approximately 4.75 miles to the northwest, Tehachapi Municipal Airport approximately 7.25 miles to the northwest, and Mojave Airport, approximately 7.5 miles to the east. Review of the Kern County Airport Land Use Compatibility Plan (ALUCP) concludes that the project site is not located within the sphere of influence of any airport as identified by the ALUCP. As the project site is not within a planning or airspace boundary of these airports, the project impact would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.9-6: The project would impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

The project would not result in permanent changes or increases to the number of existing daily vehicle trips, as the reclamation activities would be temporary and are expected to be completed within approximately two years of initiation of the reclamation. Although in the short term the project would generate vehicle trips traveling to and from the project site during reclamation, these vehicles would continue to use the existing site ingress/egress access point(s) and would not impact County roadway networks or require alterations or temporary closures of public

roadways. Furthermore, the estimated trip count associated with the project does not exceed the existing trips associated with the vested mining operations. Therefore, public roadways would continue to have sufficient capacity to serve the existing number of vehicles traveling to and from the project and provide adequate access for emergency vehicles (Sespe Consulting 2025e).

The site access is via Oak Creek Road and the site is bisected by Tehachapi Willow Springs Road, either or both of which roads would provide access to the site in the event of an emergency. The project is not anticipated to physically impede the existing emergency response plans, emergency vehicle access, or personnel access to the site. Therefore, no impacts related to impairment of the implementation of, or physical interference with, an adopted emergency response plan or emergency evacuation plan are anticipated, and this impact would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.9-7: The project would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

As discussed in **Chapter 3, *Project Description***, the project proponent intends to continue vested mining operations and the project involves the County's approval of an amended reclamation plan to provide for reclamation of mined lands. The project does not include the development of residential or other occupied uses on the project site.

As discussed in **Section 4.9.2, *Environmental Setting***, and in more detail at **Impact 4.18-2, in Section 4.18, *Wildfire***, the project site is located in an area identified as having a combination of "Moderate," "High," and "Very High" FHSZ within the SRA (CAL FIRE 2023). While the project site currently has some areas of native vegetation, the majority of these areas would be cleared to accommodate future vested mining activities. Once vegetation is removed and excavation recesses into the mining area, and overburden stockpile footprints are established, vegetation fuel sources would become limited or nonexistent within the mining and other operational areas. The cleared mining and stockpile areas and pit slopes would serve as a barrier between adjacent County lands in the unlikely event of a nearby wildfire (Sespe Consulting 2025b).

Once project reclamation commences, the majority of the project site would be disturbed due to vested mining operations, and would therefore be generally devoid of vegetation. Additionally, any debris, structures and equipment would be removed during site reclamation in accordance with local, state and federal regulations. As such, there would be no buildings or structures installed and/or remaining post-reclamation that would create or exacerbate a fire hazard on the project site (Sespe Consulting 2025b).

Project reclamation would include revegetation of disturbed areas in accordance with the proposed reclamation plan. The proposed revegetation seed mix species would be native and drought-tolerant (i.e., low-lying shrubs and grasses), and would not result in a substantial increased fire risk (Sespe 2025b). Ultimately, because the site will be cleared of all existing structures and stressed vegetation, no new structures would be constructed, and because proposed revegetation species would be native and not prone to wildfires, the project would decrease wildfire risk compared to the existing onsite conditions (Sespe Consulting 2025b).

A risk of wildland fire ignition always exists when vehicles operate in or near potential fuel sources; however, with proper maintenance of equipment and standard avoidance and management measures, the risk would be reduced. The site is not adjacent to urbanized areas; however, there are isolated residences, residential accessory structures, and structures in proximity to the project site. While the project is not anticipated to significantly increase the risk of wildfire, Mitigation Measure **MM 4.9-5** would be implemented, which includes the development and approval of a Fire Safety Plan from the KCFD. Although impacts would be less than significant without implementation of mitigation, Mitigation Measure **MM 4.9-5** would further reduce the potential impacts from wildfire. Therefore, impacts would be less than significant.

Mitigation Measures

MM 4.9-5 At least 30 days prior to commencement of reclamation activities, the project proponent shall develop and implement a Fire Safety Plan. The project proponent shall submit the plan, along with maps of the project site and access roads, to the Kern County Fire Department for review and approval. A copy of the approved Fire Safety Plan shall be submitted to the Kern County Planning and Natural Resources Department to be kept on file. The Fire Safety Plan shall contain notification procedures and emergency fire precautions, including, but not limited to, the following:

- a. Internal combustion engines used off-road shall be equipped with spark arresters. Spark arresters shall be in good working order.
- b. Light trucks and cars with factory-installed (type) mufflers shall be used only on roads where the roadway is cleared of vegetation. These vehicle types shall maintain their factory-installed (type) mufflers in good condition.
- c. Fire rules shall be posted on the project bulletin board at the contractor's field office and in areas visible to employees.
- d. Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials.
- e. Personnel shall be trained in the practices of the Fire Safety Plan relevant to their duties. Construction and maintenance personnel shall be trained and equipped to extinguish small fires to prevent them from growing into more serious threats.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.9-5**, impacts would be less than significant.

Impact 4.9-8: The project would generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste. Specifically, the proposed project would exceed the following qualitative thresholds: the presence of domestic flies, mosquitoes, cockroaches, rodents, and/or any other vectors associated with the project is significant when the applicable enforcement agency determines that any of the vectors:

- i. Occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and
- ii. Are associated with design, layout, and management of project operations; and
- iii. Disseminate widely from the property; and
- iv. Cause detrimental effects on the public health or well-being of the majority of the surrounding population.

It is anticipated that at the conclusion of reclamation, a lake will form in Pit B. The lake is not anticipated to contribute to disease vectors (chiefly, mosquitos) given the remote area of Pit B, the final topography, and the facility as a whole. *Culex* mosquitos (the most common mosquito vector) are generally weak fliers, typically staying within 1-2 miles of their breeding sites. Moreover, mosquitos typically fly at a height not exceeding 4 meters. (Bellini et al. 1997). Thus, any mosquitos that may breed in the final reclaimed lake condition will likely remain in the immediate vicinity of Pit B, reducing any potential impact to humans, livestock, or wildlife.

The project does not include the generation, handling, or disposal of agricultural waste; thus, the project would not create a potential impact associated with that issue. Notwithstanding the aforementioned lake in Pit B, the project would involve activities that could result in the potential to create temporary areas of standing water that could provide breeding areas for mosquitoes, flies, or rodents. These potential disease vectors could pose a potential hazard to personnel or the public. However, standard construction techniques to avoid creating areas of standing water and to manage waste and containers, are expected to result in a minimal, if any, increase in the potential for vector generation.

Although there would be limited, if any, increased potential for vector generation associated with the proposed project, this impact is considered potentially significant. Mitigation Measure **MM 4.9-6** requires that food and garbage be properly disposed of in closed containers and regularly removed from the site. Implementation of this measure would reduce potential impacts associated with vectors and agricultural waste disposal to less than significant.

Mitigation Measures

MM 4.9-6 All food, garbage, and plastic shall be disposed of in closed containers and regularly removed from the site to minimize potential attraction of vectors.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.9-6**, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures**Cumulative Setting**

Section 3.7, *Cumulative Effects Overview*, of this EIR discusses cumulative projects near the project (**Table 3-15, *Cumulative Projects List***, in **Chapter 3, *Project Description***, lists specific projects considered in the cumulative impact analysis). Impacts associated with hazards and hazardous materials are generally site-specific and have limited potential to substantially contribute to other hazards associated with other projects and activities on a regional or local basis. Projects and activities within the County are subject to various regulatory requirements, similar to those discussed here, and would minimize the hazard potential of those activities. Kern County recognizes that hazards exist throughout the County and everyday life.

Impact 4.9-9: The project would contribute to cumulative hazards and hazardous materials impacts.

The project site is not included on a list of hazardous materials sites or immediately upstream of environmentally sensitive areas that could result in a release of hazardous materials into the environment, not directly related to the proposed project. Implementation of the proposed project is not anticipated to contribute to a cumulative hazardous materials impact due to generation of a substantial amount of waste. Furthermore, the proposed project would not significantly interfere with an adopted emergency response plan or emergency evacuation plan. The proposed project is not anticipated to contribute to a cumulative hazardous materials impact due to interference with an emergency route.

Uses proposed on the project site would include the permitted use of hazardous materials associated with vested mining operations and project reclamation activities. Project reclamation would also involve trucks hauling potentially hazardous materials on public roadways. Any hazardous waste generated by the proposed project would be disposed of or recycled in accordance with all Federal, State, and local regulations. This requires in part that an SPCC Plan be developed and implemented for the proposed project, which would address the storage and treatment of any spilled contaminants at the project site. Secondary containments are used around fuel, oil, gas, and any other hazardous materials storage areas; such secondary containments would continue to be used as such during reclamation. All hazardous materials would be managed in accordance with applicable regulations and removed from the project site by a certified contractor. Therefore, the potential for impacts associated with the routine transport, storage, use, and disposal of hazardous materials is considered less than significant.

The proposed project would be required to comply with all applicable Federal, State, and local regulations regarding the handling of hazardous materials. With implementation of these

control measures and implementation of Mitigation Measures **MM 4.9-1** through **MM 4.9-6**, the proposed project would not result in significant impacts related to reasonably foreseeable upset or accidental conditions involving the release of hazardous materials into the environment. The proposed project would not contribute significantly to cumulative impacts associated with hazardous materials/risk of upset with implementation of Mitigation Measures **MM 4.9-1** through **MM 4.9-6**. Therefore, cumulative impacts would be less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measures **MM 4.9-1** through **MM 4.9-6**.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.9-1** through **MM 4.9-6**, cumulative impacts would be less than significant.

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Section 4.10

Hydrology and Water Quality

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Section 4.10

Hydrology and Water Quality

4.10.1 Introduction

This section of the Environmental Impact Report (EIR) addresses potential impacts of the project on hydrology and water quality, describes the environmental and regulatory setting, and discusses mitigation measures to reduce impacts where applicable. Information and data to prepare this section includes that from publicly available sources and obtained from studies prepared by the project proponent, including the following:

- *Water Supply Assessment - Mojave Life of Mine Reclamation Plan Amendment Project*, prepared by Sespe Consulting, Inc., dated June 2025 (Sespe Consulting 2025a), included as **Appendix I.1**;
- *Estimated Reclamation Water Use for the CalPortland Mojave Life of Mine Reclamation Plan Amendment Project*, prepared by Sespe Consulting, Inc., dated October 7, 2025 (Sespe Consulting 2025h), included as **Appendix I.2**;
- *Mojave Overburden Sampling Results Memo* prepared by Sespe Consulting, Inc., dated July 16, 2025 (Sespe Consulting 2025c), included as **Appendix I.3**;
- *Water Quality Memorandum for the Mojave Life of Mine Reclamation Plan Amendment Project*, prepared by Sespe Consulting, Inc., dated August 13, 2025 (Sespe Consulting 2025f), included as **Appendix I.4**;
- *Drainage Report for CalPortland Company Mojave Quarry*, prepared by Sespe Consulting, Inc., dated August 2025 (Sespe Consulting 2025g), included as **Appendix I.5**;
- *CalPortland's Mojave Life of Mine Reclamation Plan Amendment Delineation of State and Federal Jurisdictional Waters*, prepared by ELMT Consulting, Inc. Updated August 2025 (ELMT 2025), included as **Appendix D.2**;
- *Slope Stability Assessment for Mojave Life of Mine Reclamation Plan Amendment, CalPortland Mojave Cement Plant*, prepared by Golder Associates (Golder 2021a), included as **Appendix G.1**; and
- *CalPortland Mojave Cement Plant Site-Specific Hazard Analysis*, prepared by Golder Associates (Golder 2021b), included as Appendix A of Golder 2021a.

4.10.2 Environmental Setting

The proposed project is located in an unincorporated area of the southeastern part of Kern County, approximately 6 miles southeast of the City of Tehachapi and 7.25 miles west of the unincorporated community of Mojave. The project area is in the southeastern portion of unincorporated Kern County, situated in the Mojave Desert on the southeastern edge of the Tehachapi Mountains (**Figure 3-1, Site Vicinity**).

Geology in the project area is mapped as Paleozoic-age limestone and schist of the Bean Canyon series (Troxel & Morton 1962), Mesozoic-age granitic rock (quartz monzonite), Miocene-age felsite dikes, and Quaternary-age alluvium (Dibblee 1963; Dibblee and Louke 1970). Limestone in the project site area ranges from coarsely crystalline white and grayish-white to finer-grained, massive to banded, blue-gray to white. Some of the limestone contains more than 54 percent calcium oxide (Troxel & Morton 1962). The limestone is bordered by quartz monzonite and related granitic rocks that form bold relief as strike ridges or as ovoid, isolated knobs. Granitic dikes penetrate the limestone bodies in many places and commonly the bodies are thoroughly shattered. The limestone strata strike northeast and in most places dip between 60 and 80 degrees southeast. Within the property boundary, mapped geologic units include Paleozoic metasedimentary rocks (pKm), primarily altered limestone, as well as schist; Mesozoic intrusive granitic rocks (gr); and a variety of Quaternary unconsolidated deposits, including alluvium (Qa), fan deposits (Qyf, Qf, Qof), and older terrace gravels (Qot). Artificial fill is also present in areas of past disturbance (Sespe Consulting 2025g).

Because the project area is located at the Tehachapi Mountain-alluvial basin transition, groundwater conditions are likely to be variable. Within the granitic and limestone rock underlying much of the site, groundwater is expected to move principally through fracture flow. In contrast, in the alluvial aquifer immediately to the east, homogenous groundwater conditions are likely predominant. Although groundwater depths and flow directions are typically controlled by fracture orientation, void space, interconnectivity, and other factors, and thus can differ significantly both spatially and at depth, groundwater in the alluvial basin generally flows southeasterly (Duell 1987). A study prepared by Ken Schmidt and Associates (Schmidt 2009) (Attachment A of Sespe Consulting 2025a) determined that groundwater flow moves southeasterly on the west side of the plant site and more easterly to the east of the plant (Sespe Consulting 2025a).

Surface Water

The project site is located within the Willow Springs Hydrologic Area of the Antelope Hydrologic Unit. The project area has no perennial streams or bodies of water, but contains several seasonal/intermittent drainages. Oak Creek is an intermittent stream with a drainage course that flows around the north and easternmost sides of the project site and then southeast towards the Antelope Valley. Major drainage in the project area is primarily to the southeast toward the Oak Creek drainage. An unnamed wash crosses the central portion of the project site, running subparallel to Tehachapi-Willow Springs Road and flowing to the southeast. Runoff on the northernmost side of the project area is via a series of gullies or channels, which direct surface flows to the Oak Creek channel that runs adjacent to the northern border of the site, along Oak Creek Road. Runoff from the eastern half of the project site generally flows south and east; ephemeral drainages flow to Oak Creek, east of the site. Runoff from the majority of the western half of the project site flows south and east to an unnamed ephemeral channel that runs adjacent to Tehachapi-Willow Springs Road. The confluence of the unnamed channel and Oak Creek is approximately 5 miles southeast of the project site (Sespe Consulting 2025g).

Groundwater

Most of the project area lies outside of the California Department of Water Resources (DWR) DWR Bulletin 118 groundwater basins. However, a portion of the Fremont Valley Groundwater Basin extends to the west of the current east mining pit and plant site and a portion of the Antelope Valley Groundwater Basin overlaps with part of the project area south and west of the plant site. Both groundwater basins are within the South Lahontan Hydrologic Region (DWR 2004, 2018, Sespe Consulting 2025a), which encompasses portions of the western Mojave Desert characterized by internally drained basins and limited surface water inflow from surrounding mountains. Additional detail regarding the hydrologic characteristics, priority ranking, and adjudication status of these basins is provided in the following subsections.

Antelope Valley Groundwater Basin

The project area lies within the northwestern margin of the Antelope Valley Groundwater Basin, an adjudicated basin that extends over the western Mojave Desert Region. According to the current Sustainable Groundwater Management Act (SGMA) Data Viewer portal, the basin is ranked as a very low priority basin (Sespe Consulting 2025a).

The Antelope Valley Groundwater Basin covers approximately 1.01 million surface acres and underlies an extensive alluvial valley in the western Mojave Desert. The basin is bounded on the east by ridges, buttes, and low hills that form a surface and groundwater drainage divide and on the north by Fremont Valley Groundwater Basin (discussed below) at a groundwater divide approximated by a southeastward-trending line from the mouth of Oak Creek through Middle Butte to exposed bedrock near Mojave Mine, and by the Rand Mountains farther east. Elevations of the alluvial valley range from about 2,300- to 3,500-feet amsl. The basin is bounded by the Garlock fault zone and the Tehachapi Mountains to the northwest, and the San Andreas Fault zone and the San Gabriel Mountains to the southwest. In addition to the Garlock and San Andreas Fault zones, numerous other faults within the basin impede groundwater flow. Bloyd (1967) described eight groundwater subunits in this basin bounded, in part, by faults that displace the water table. The Randsburg-Mojave, Cottonwood, Willow Springs, Rosamond, and Neenach faults displace the water table in the western part of the basin, as does an unnamed fault in the southwestern part of the basin (Sespe Consulting 2025a).

Two primary aquifers are recognized within the vicinity of the project site: the upper or principal aquifer, and the lower or deep aquifer (DWR 2015). The principal aquifer is unconfined and generally thickest in the southern portion of the valley. The deep aquifer is confined and thickest near the dry lakes in the northeastern portion of the valley (DWR 2003). The primary water-bearing materials consist of Pleistocene- to Holocene-age alluvial deposits, floodplain deposits, and lacustrine deposits that contain coarse gravels near the mountain fronts and become finer-grained toward the central portion of the valley (DWR 2015). Annual rainfall typically ranges from 5 to 10 inches (Sespe Consulting 2025a).

Based on the work of DWR (2015), recharge to the principal aquifer occurs by percolation of perennial streamflow into the alluvial fans at the base of the surrounding mountains. In addition to natural recharge, the principal aquifer is artificially recharged through placing water into aquifer storage and recovery wells (DWR 2015). The Big Rock and Little Rock Creeks, in the southern part of the basin, contribute about 80 percent of runoff into the basin (Durbin 1978).

Additionally, irrigation from agriculture and possible leakage from canals may also contribute to recharge. The total storage capacity has been reported at 68 to 70 million acre-feet (Sespe Consulting 2025a).

From 1975 through 1998, groundwater level changes ranged from an increase of 84 feet to a decrease of 66 feet (Carlson, Leighton, Phillips, & Metzger 1998). The parts of the basin with declining water levels are along the Highway 14 corridor from Palmdale through Lancaster to Rosamond and surrounding Rogers Lake on Edwards Air Force Base (Carlson, Leighton, Phillips, & Metzger 1998). Historically, groundwater in the basin flowed north from the San Gabriel Mountains and south and east from the Tehachapi Mountains toward Rosamond Lake, Rogers Lake, and Buckhorn Lake. These dry lakes are places where groundwater can discharge by evaporation. Because of recent groundwater pumping, groundwater levels and flow have been altered in urban areas such as Lancaster and Edwards Air Force Base. Groundwater pumping has caused subsidence of the ground surface as well as earth fissures to appear in Lancaster and on Edwards Air Force Base. By 1992, 292 square miles of Antelope Valley had subsided more than one (1) foot. This subsidence has permanently reduced aquifer-system storage by about 50,000 acre-feet (Sneed and Galloway 2000) (Sespe Consulting 2025a).

The Antelope Valley Groundwater Basin is an adjudicated basin that has been determined to be in a condition of overdraft, where groundwater withdrawals exceed the defined total safe yield established by the Los Angeles County Superior Court in 2011. The court identified a basin-wide safe yield of 110,000 acre-feet per year. This yield equates to a maximum sustainable withdrawal of 0.18 acre-feet per acre per year when applied across the approximately 600,000-acre adjudicated portion of the basin. However, the adjudication Judgement and the 2023 Antelope Valley Groundwater Basin Watermaster Annual Report, state a native safe yield for AVGB of 82,300 acre-feet per year, which excludes consideration of imported water return flows. Based on the native safe yield, this equates to 0.14 acre-feet per acre per year when applied across the 600,000-acre adjudicated portion of the basin (Sespe Consulting 2025a).

Fremont Valley Groundwater Basin

The Fremont Valley Groundwater Basin underlies about 335,000 acres in Fremont Valley, which is adjacent to the north of Antelope Valley. It is ranked as a low priority basin, based on the current listing in the SGMA Data Viewer portal. The basin is bounded on the northwest by the Garlock fault zone against impermeable crystalline rocks of the El Paso Mountains and the Sierra Nevada. This basin is bounded on the east by crystalline rocks of the Summit Range, Red Mountain, Lava Mountains, Rand Mountains, Castle Butte, Bissel Hills, and Rosamond Hills. The basin is bounded on the southwest by the Antelope Valley Groundwater Basin along a groundwater divide approximated by a line connecting the mouth of Oak Creek through Middle Butte to exposed basement rock near Gem Hill (Sespe Consulting 2025a).

Average annual rainfall in the Fremont Valley ranges from 4 to 12 inches. Surface water in Fremont Valley drains toward Koehn (dry) Lake; however, surface drainage overlying the southwestern-most part of the basin is southward toward the town of Rosamond.

Both Quaternary alluvium and lacustrine deposits are water-bearing; however, the alluvium is the most important water-bearing material in the basin (DWR 1969). The alluvium is about

1,190 feet thick (Bader 1969, DWR 1964) along the margin of the basin and thins toward the middle of the basin, where it is interbedded with thick layers of lacustrine silt and clay near Koehn Lake. Groundwater in the alluvium is generally unconfined, although locally confined conditions occur near Koehn Lake (DWR 1964). Average well yield is about 530 gallons per minute (gpm) with a maximum yield of 2,580 gpm (DWR 1975) (Sespe Consulting 2025a).

The Garlock and El Paso fault zones, which extend along the foothills of the Sierra Nevada and El Paso Mountains, form restrictive groundwater barriers on the west and northwest sides of the basin (Dibblee 1967). The Cantil Valley fault traverses the northeast part of the basin, but its effect on groundwater is not known. The Muroc fault traverses the central part of the basin and forms a partial barrier to groundwater flow with recent studies showing distinct groundwater elevations north and south of the fault (Woodward & Curran 2018) (DWR 1964) (Sespe Consulting 2025a).

Natural recharge of the basin includes percolation of ephemeral streams that flow from the Sierra Nevada. The general groundwater flow direction is toward Koehn Lake at the center of the valley (Bader 1969, DWR 1964). There is no appreciable quantity of groundwater flowing out of the basin (Bader 1969). In the southwestern part of the basin, groundwater flows from near Oak Creek northward toward the town of Mojave and continues under the surface drainage divide toward Koehn Lake. Elsewhere in the Fremont Valley Groundwater Basin, groundwater flows toward Koehn Lake. A simple, spreadsheet-based groundwater balance model estimates 13,800 acre-feet per year of groundwater recharge (Woodward & Curran 2018). The total storage capacity of the basin is calculated to be 4,800,000 acre-feet (DWR 1975) (Sespe Consulting 2025a).

Project Area Groundwater Conditions

Because the project area is located at the Tehachapi Mountain-alluvial basin transition, groundwater conditions are likely to be variable. Within the crystalline rock underlying much of the site, groundwater is expected to move principally through fracture flow. In contrast, in the alluvial aquifer immediately to the east, homogenous groundwater conditions are likely predominant. Although groundwater depths and flow directions are typically controlled by fracture orientation, void space, interconnectivity and other factors, and thus can differ significantly both spatially and at depth, groundwater in the alluvial basin generally flows southeasterly (Duell 1987). The *Updated Hydrogeological Report for CalPortland Company Mojave Plant* prepared by Ken Schmidt and Associates (Schmidt 2009) determined that groundwater flow moves southeasterly on the west side of the plant site and more easterly to the east of the plant (Sespe Consulting 2025a).

Groundwater wells in the vicinity of the project span the boundaries of the Fremont Valley Groundwater Basin and Antelope Valley Groundwater Basin. Potable Water Wells 5 and 6, Solar Well B-9, and Solar Well B-2 are situated along the margin of the southwestern boundary of the Fremont Valley Groundwater Basin. The Big Meadow Well is also situated within the southwestern region of the Fremont Valley Groundwater Basin near Oak Creek and the Garlock Fault. Based on the well completion reports (provided in Appendix B of Sespe Consulting 2025a), these five (5) wells in the Fremont Valley Groundwater Basin are completed in alluvium.

Groundwater elevations were measured at a subset of the wells located in the Antelope Valley Groundwater Basin on October 1, 2024, by Sespe Consulting. Depth-to-water measurements were 26.8 feet below top of casing (TOC) (3,841 feet amsl) at Potable Well 5, 9.75 feet below TOC (3,714 feet amsl) at Potable Well 6, and 2.7 feet below TOC at Solar Well B-9. As discussed above, Wells 5 and 6 are part of a permitted public water supply system and do not supply water for production.

Quarry Well R4-WE1 and Quarry Well R4-WE2 are situated at the northwestern boundary of the Antelope Valley Groundwater Basin. While the Antelope Valley Groundwater Basin is characterized as an alluvial aquifer (DWR 2004), the well completion reports for the Quarry Well R4-WE1 and Quarry Well R4-WE2 indicate that the wells are completed in fractured bedrock, where groundwater conditions are controlled by fracture density and orientation, void space, interconnectivity and other factors. As such, the Quarry Well R4-WE1 and Quarry Well R4-WE2 are not considered part of the Antelope Valley Groundwater Basin's managed alluvial water bearing system (Sespe Consulting 2025a).

Table 4.10-1 Water Supply Well Summary

Well Name (Basin)	Ground Surface Elev. ¹ (ft amsl)	Total Drill Depth (ft)	Screen Interval (ft)	Static Water Elev. ² (ft amsl)	1 st Water ³ (ft bgs)	Max. Pump Capacity (gpm)	Annual Production (ac ft)
Potable Well 6 (FVGB)	3,874	64	20-64	3,854	25	45	13
Potable Well 5 (FVGB)	3,890	84	30-60	3,855	40	--	Backup
R4-WE1 ⁴ (AVGB-Bedrock)	3,654	442	180-440	3,542	112	100	45.6
R4-WE2 ⁴ (AVGB-Bedrock)	3,654	162	62-162	3,361	23	23	61.3
Solar Well B2 (FVGB)	4,462	86.5	46 - 87	4,462	45	45	23.8
Solar Well B9 (FVGB)	4,431	97	61-91	--	--	--	29.1
Big Meadow 5 (FVGB)	4,942	200	80-170	4,942	180	180	52.3

Source: Sespe Consulting 2025a.

Notes:

1. Ground surface elevations for each well were estimated using USGS 1/3 arc-second digital elevation models (DEM) and may not reflect surveyed site-specific benchmarks.
2. Static water elevations were calculated by subtracting reported depth to groundwater (in feet below ground surface) from the estimated ground surface elevation (in feet above mean sea level). These values are considered approximate due to variability in DEM resolution, well casing installation depths, and lack of consistent datum references in historical well completion reports.
3. 1st Water reflects reported depth to water below ground surface at the time of well completion.
4. Quarry Wells collars are located in Antelope Valley Groundwater Basin, but screened in bedrock not alluvium.

The existing Mojave Mine operations currently source water for mining, reclamation and cement production from five (5) of the seven (7) existing groundwater wells presented in **Table 4.10-1**, above. Of these, Quarry Wells R4-WE1 and R4-WE2 are located within the project property boundary. Potable Wells 5 and 6 are located within or directly adjacent to the property boundary and serve the cement plant as part of the site's permitted public water system, with Potable Well 5 maintained as a backup source. The remaining three (3) wells, Big Meadow 5, Solar Well B2, and Solar Well B9, are situated nearby but outside the property boundary and are currently used to support mining and reclamation activities (Sespe Consulting 2025a).

The current demand, or baseline consumptive use, supplied by five (5) of the seven (7) existing wells that supports both extraction and processing, as well as handling of overburden and process waste materials placed and/or stockpiled for site reclamation. Based on well production records for the period October 2019 through September 2024 (corresponding to the 2020-2024 water years), Sespe Consulting (2025a) determined the average annual groundwater production from all existing wells to be approximately 225.1 acre-feet. Of this quantity, approximately 77 acre-feet per year is attributed to quarrying activities (including dust suppression), while the remaining 148.1 acre-feet supports cement plant operations, including potable water sourced through the public water system (Sespe Consulting 2025a).

Groundwater Quality

Regional groundwater quality data from DWR Bulletin 118 (2004), the SB 200 Aquifer Risk Map (2023), the Public Draft CalGW Update 2025, the Lahontan Regional Water Quality Control Plan (1995, as amended 2018), and the Kern County Integrated Regional Water Management Plan (2021) indicate that groundwater in the Antelope Valley (6-44) and Fremont Valley (6-46) Groundwater Basins is dominated by calcium-, sodium-, and sulfate-bicarbonate types. In the Antelope Valley Basin, reported total dissolved solids (TDS) concentrations range from 400 to 800 milligrams per liter (mg/L), nitrate-nitrogen concentrations are generally below 10 mg/L, and pH ranges from 7.0 to 8.2. In the Fremont Valley Basin, water chemistry varies spatially, with TDS ranging from 350 to 1,100 mg/L (average about 596 mg/L), nitrate-nitrogen concentrations below 10 mg/L, and pH ranging from 7.0 to 8.0. The SB 200 Aquifer Risk Map classifies the non-basin area containing the Mojave Plant as having low to moderate aquifer risk, based on data from the State Water Resources Control Board's Groundwater Ambient Monitoring and Assessment Program (GAMA) and Division of Drinking Water (DDW) databases showing TDS generally below 800 mg/L, nitrate-nitrogen concentrations below 5 mg/L, and no detections of anthropogenic contaminants.

At the project site, groundwater chemistry is described in the Water Quality Memorandum (Sespe Consulting 2025f), the Overburden Sampling Results Memorandum (Sespe 2025c), and the Hydrogeologic Report (Schmidt 2009). Analytical data indicate neutral to slightly alkaline pH, low leaching potential in overburden materials, and no exceedances of Lahontan Basin Plan objectives for TDS, nitrate, and trace metals. Trace detections of chromium and nitrate near the cement plant area were reported under Lahontan Regional Water Quality Control Board (RWQCB) oversight. Groundwater in the project vicinity is managed under Lahontan RWQCB jurisdiction, which establishes water quality objectives applicable to the Fremont Valley region.

Flooding

As shown in **Figure 4.10-1, Flood Zone Map**, an approximately 8-acre area within the southeastern portion of the project site encroaches into the 100-year floodplain as mapped on FEMA FIRM Panel 06029C3275E (effective September 26, 2008). The project site is located primarily in Zone X, “[a]reas determined to be outside the 0.2% annual chance floodplain.” The northernmost edge of the project site, in close proximity to Oak Creek, is located immediately adjacent to area mapped as Zone A, “[a]rea subject to 1% annual chance flood; no Base Flood Elevations determined” (Sespe Consulting 2025g).

4.10.3 Regulatory Setting

The project would be subject to County, State, and Federal water quality regulations, as discussed below.

Federal

Clean Water Act

The Clean Water Act (33 United States Code [USC] Section 1251 et seq. [CWA]), formally the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States.

The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and has given the USEPA the authority to implement pollution control programs. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain nonpoint source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). In California, NPDES permitting authority is delegated to, and administered by, the nine RWQCBs. The project is within the jurisdiction of the Lahontan RWQCB.

Section 401, Water Quality Certification

Section 401 of the CWA requires that, prior to issuance of any Federal permit or license, any activity, including river or stream crossing during road, pipeline, or transmission line construction, that may result in discharges into waters of the United States must be certified by the State, as administered by the RWQCB. This certification ensures that the proposed activity does not violate Federal and/or State water quality standards.

Section 402, National Pollutant Discharge Elimination System

Section 402 of the CWA authorizes the State Water Resource Control Board (SWRCB) to issue an NPDES Industrial Storm Water General Permit (Water Quality Order 2014-0057-DWQ, as amended by Order WQ 2015-0122-DWQ and Order WQ 2018-0028-DWQ), referred to as the “Industrial General Permit.”

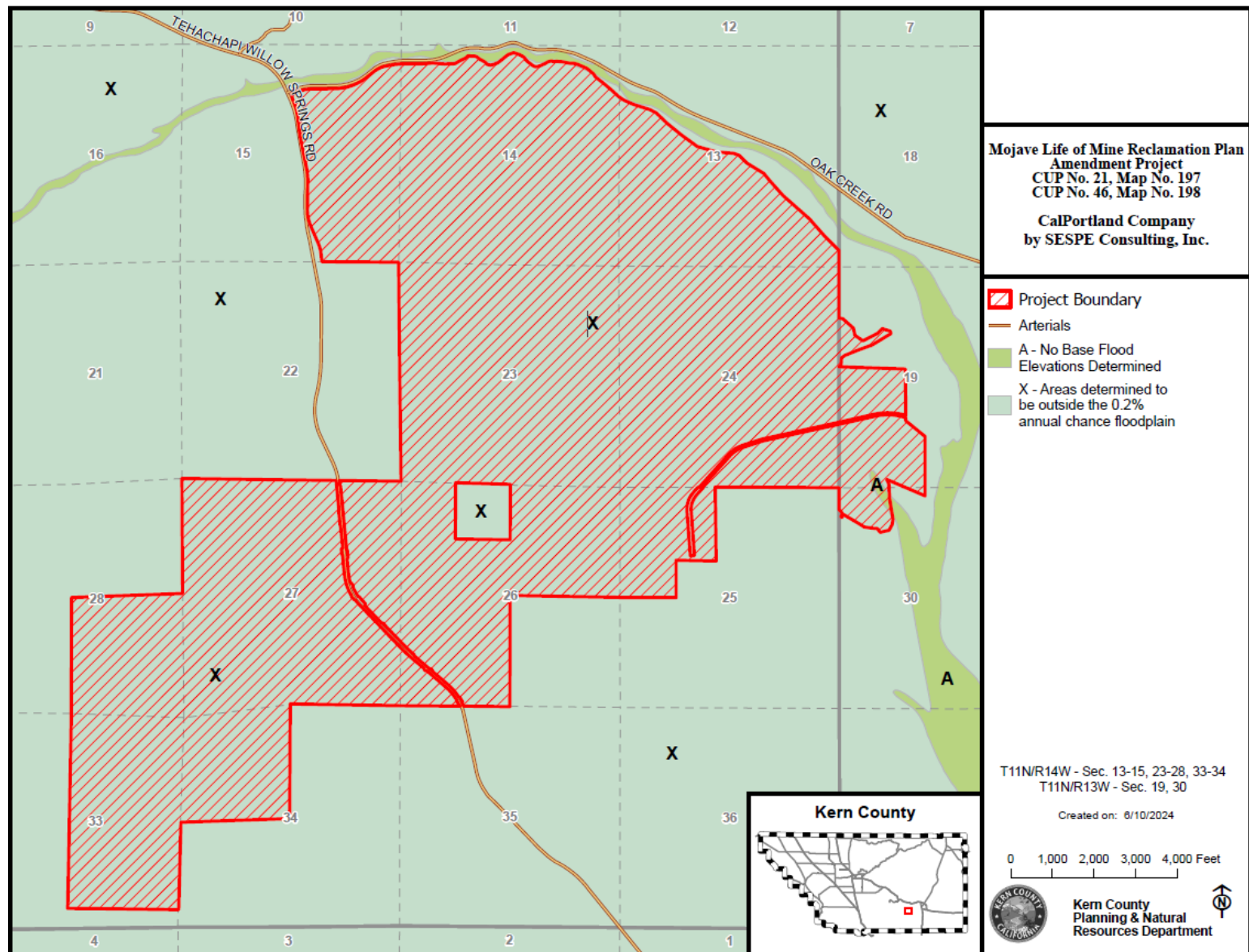


**Figure 4.10-1
Flood Zone Map**

Section 404, Discharge of Dredged or Fill Materials

Section 404 of the CWA establishes programs to regulate the discharge of dredged and fill material in waters of the United States, including wetlands. For purposes of CWA Section 404, the limits of non-tidal waters extend to the Ordinary High Water (OHW) line, defined as the line on the shore established by the fluctuation of water and indicated by physical characteristics, such as natural line impressed on the bank, changes in the character of the soil, and presence of debris. When an application for a Section 404 permit is made, the applicant must show it has:

- Taken steps to avoid impacts to wetlands or waters of the United States where practicable;
- Minimized unavoidable impacts on waters of the United States and wetlands; and
- Provided mitigation for unavoidable impacts.

Section 404 of the CWA requires a permit for construction activities involving placement of any kind of fill material into waters of the United States or wetlands. A Water Quality Certification pursuant to CWA Section 401 is required for Section 404 permit actions. If applicable, construction would also require a request for Water Quality Certification (or waiver thereof) from the Lahontan RWQCB. Project activities would adhere to Federal and State water quality standards and would be in compliance with CWA Sections 401 and 404.

The onsite drainage features do not have a surface hydrologic connection to downstream waters of the United States and none of the onsite drainage features meet the U.S. Army Corp of Engineers (USACE) wetland definition to qualify as jurisdictional wetlands (ELMT 2025).

Section 403, Water Quality Standards and Implementation Plans

Section 303(d) of the CWA (33 USC 1250, et seq., at 1313[d]) requires states to identify “impaired” water bodies as those that do not meet water quality standards. States are required to compile this information in a list and submit the list to the USEPA for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, States are required to prioritize waters and watersheds for future development of Total Maximum Daily Load (TMDL) requirements. The SWRCB and RWQCBs have ongoing efforts to monitor and assess water quality, prepare the Section 303(d) list, and develop TMDL requirements. No “impaired” water bodies are identified within the project site.

National Flood Insurance Program

FEMA is responsible for conducting floodplain studies and publishing Flood Insurance Rate Maps (FIRM) that delineate flood hazard areas. FEMA manages the National Flood Insurance Program (NFIP). This program makes Federally backed flood insurance available for communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage. Kern County is a participating jurisdiction in the NFIP and therefore all new development must comply with the minimum requirements of the NFIP.

State

California Department of Water Resources

DWR's major responsibilities include preparing and updating the California Water Plan to guide development and management of the State's water resources; planning, designing, constructing, operating, and maintaining the State Water Resources Development System; regulating dams; providing flood protection; assisting in emergency management to safeguard life and property; educating the public; and serving local water needs by providing technical assistance. In addition, DWR cooperates with local agencies on water resources investigations, supports watershed and river restoration programs, encourages water conservation, explores conjunctive use of ground and surface water, facilitates voluntary water transfers, and, when needed, operates a State drought water bank.

Sustainable Groundwater Management Act

A series of three bills passed by the California legislature were signed by Governor Brown on September 16, 2014. These three bills, Assembly Bill (AB) 1739, Senate Bill (SB) 1168, and SB 1319, together comprise the Sustainable Groundwater Management Act (SGMA) of 2014. The SGMA provides a structure under which local agencies are to develop sustainable groundwater management programs. The SGMA applies directly to basins or subbasins designated by DWR as high- or medium-priority basins.

Basin prioritization is used by the DWR to determine the level of SGMA oversight for each basin. The project area overlies portions of the Fremont Valley Groundwater Basin and the Antelope Valley Groundwater Basin. Both are classified as low- or very low-priority basins under SGMA, meaning they are not currently required to prepare a Groundwater Sustainability Plan (GSP). However, the Antelope Valley Groundwater Basin is also an adjudicated basin, subject to SGMA reporting requirements under California Water Code section 10720.8. As such, while GSP-related objectives do not apply to the project's *Water Supply Assessment*, annual watermaster reporting for the adjudicated Antelope Valley Groundwater Basin is relevant and was reviewed as part of the groundwater sufficiency discussion in the *Water Supply Assessment* (Sespe Consulting 2025a).

Senate Bill 610

SB 610 was passed on January 1, 2002, amending California state law to require detailed analysis of water supply availability for large development projects. An SB 610 Water Supply Assessment (WSA) must be prepared if the following three conditions are met:

1. the project is subject to California Environmental Quality Act (CEQA) under California Water Code Section 10910;
2. the project meets criteria to be defined as a "Project" under California Water Code Section 10912; and
3. the applicable water agency's current Urban Water Management Plan does not account for the water supply demand associated with the project.

A project would meet the definition of “Project” per California Water Code Section 10912(a) if it is:

- a proposed residential development of more than 500 dwelling units;
- a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- a proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- a proposed hotel or motel, or both, having more than 500 rooms;
- a proposed industrial, manufacturing, or processing plant or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- a mixed-use project that includes one or more of the projects specified in this subdivision; or
- a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

Porter-Cologne Water Quality Control Act

The SWRCB regulates water quality through the Porter-Cologne Water Quality Act (Porter-Cologne Act) of 1969, which contains a complete framework for the regulation of waste discharges to both surface waters and groundwater of the State. On the regional level, the project falls under the jurisdiction of the Lahontan RWQCB, which is responsible for the implementation of Federal and State water quality protection statutes, regulations, and guidelines. The project site is situated within the jurisdictional boundaries of the Lahontan RWQCB and within the South Basin area of the Lahontan Region. The *Water Quality Control Plan for the Lahontan Region North and South Basins* (Lahontan Region Basin Plan) establishes surface and groundwater standards for the region according to designated beneficial uses. The Lahontan Region Basin Plan summarizes applicable provisions of separate State Water Resources Control Board (SWRCB) and Lahontan RWQCB planning and policy documents, and of water quality management plans adopted by other federal, state, and regional agencies. Any person discharging or proposing to discharge waste, other than into a community sewer system, must file a Report of Waste Discharge (RWD) with the Lahontan RWQCB. Waste discharge requirements are prescribed for each discharger on a case-by-case basis. Discharges from the project site are subject to the Lahontan Region Basin Plan (Sespe Consulting 2025a).

State Water Rights Permit

The State of California has required parties to obtain a permit to divert surface water for beneficial uses since 1914 under provisions of the State Constitution and the California Water Code. A water rights permit specifies the place of diversion and the beneficial uses for which the water may be diverted. The permit will also typically specify the maximum annual diversion quantity and may specify the maximum diversion rate. Permit holders must file reports with the SWRCB documenting annual diversions.

California Fish and Game Code Streambed Alteration Agreement

Section 1602 of the California Fish and Game Code protects the natural flow, bed, channel, and bank of any river, stream, or lake designated by the California Department of Fish and Wildlife (CDFW) in which there is, at any time, any existing fish or wildlife resources, or benefit for the resources. Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State, and requires any person, State or local governmental agency, or public utility to notify the CDFW before beginning any activity that will:

- Substantially divert or obstruct the natural flow of any river, stream or lake;
- Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

If it is determined that any project-related actions would have the potential to necessitate a Streambed Alteration Agreement, then such an agreement would be prepared and implemented prior to ground disturbance activities associated with the project, thus maintaining compliance with Section 1602 of the California Fish and Game Code. A Streambed Alteration Agreement is required if the CDFW determines the activity could substantially adversely affect an existing fish and wildlife resource. The agreement includes measures to protect fish and wildlife resources while conducting the project. The CDFW must comply with CEQA before it may issue a final Streambed Alteration Agreement; therefore, the CDFW must wait for the Lead Agency to fully comply with CEQA before it may sign a draft Streambed Alteration Agreement, thereby making it final.

California Water Code Section 13260

Under the Porter-Cologne Act, California Water Code Section 13260 requires that any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the State, other than into a community sewer system, must submit a report of waste discharge to the applicable RWQCB. “Waste” is defined in the Basin Plan to include any waste or deleterious material including, but not limited to, waste earthen materials (such as soil, silt, clay, rock, or other organic or mineral material) and any other waste as defined in California Water Code Section 13050(d). Any actions related to the project that would be applicable to California Water Code Section 13260 would be reported to the Lahontan RWQCB.

Industrial Storm Water General Permit

The State Industrial Storm Water General Permit (Water Quality Order 2014-0057-DWQ, as amended by Order WQ 2015-0122-DWQ and Order WQ 2018-0028-DWQ), referred to as the “Industrial General Permit”, is an NPDES permit that regulates discharges associated with 10 broad categories of industrial activities. A new Industrial General Permit was adopted by the State on April 1, 2014 and became effective on July 1, 2015. Facilities that discharge stormwater associated with industrial activity requiring a General Permit are listed by category in 40 Code of Federal Regulations (CFR) Section 122.26(b)(14.) The facilities can be publicly or privately owned. Mining is one of the industries regulated under this permit.

Projects subject to the Industrial General Permit must implement control measures that are consistent with the Industrial General Permit. A Storm Water Pollution Prevention Plan (SWPPP) must be developed and implemented for each site covered by the Industrial General Permit. A SWPPP should include Best Management Practices (BMPs) designed to reduce potential impacts to surface water quality, unless the project activities are subject to a Notice of Non-Applicability (NONA).

The Industrial General Permit requires implementation of management measures that will achieve the performance standard of best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT). The Industrial General Permit also requires the development of an Industrial SWPPP and a monitoring plan. Through the Industrial SWPPP, sources of pollutants are to be identified and the means to manage the sources to reduce stormwater pollution are described. The Industrial SWPPP must identify, and discharges must implement, a set of minimum BMPs. Implementation of the minimum BMPs, in combination with any advanced BMPs necessary to reduce or prevent pollutants in industrial stormwater discharges, serve as the basis for compliance with technology-based effluent limitations and water quality based receiving water limitations.

Groundwater Management Act of 1992

The Groundwater Management Act of 1992, commonly referred to as AB 3030, is designed to provide local public agencies with increased management authority over groundwater resources. Groundwater is a valuable natural resource within California, and AB 3030 ensures safe production and quality by encouraging local agencies to work cooperatively to manage groundwater resources within their jurisdictions (California Water Code Section 10750).

Local

Kern County General Plan

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

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

1.3 Physical and Environmental Constraints

Goals

- **Goal 1.** To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.

Policies

- **Policy 1.** Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained (Map Code 2.1 [Seismic Hazard], Map Code 2.2 [Landslide], Map Code 2.3 [Shallow Groundwater], Map Code 2.5 [Flood

Hazard], Map Codes from 2.6 – 2.9, Map Code 2.10 [Nearby Waste Facility], and Map Code 2.11 [Burn Dump Hazard]) to support such development unless appropriate studies establish that such development will not result in unmitigated significant impact.

- **Policy 2.** In order to minimize risk to Kern County residents and their property, new development will not be permitted in hazard areas in the absence of implementing ordinances and programs. The ordinances will establish conditions, criteria and standards for the approval of development in hazard areas.
- **Policy 3.** Zoning and other land use controls will be used to regulate and, in some instances, to prohibit development in hazardous areas.
- **Policy 6.** Regardless of percentage of slope, development on hillsides will be sited in the least obtrusive fashion, thereby minimizing the extent of topographic alteration required and reducing soil erosion while maintaining soil stability.
- **Policy 7.** Ensure effective slope stability, wastewater drainage, and sewage treatments in areas with steep slopes are adequate for development.
- **Policy 8.** Encourage the preservation of the floodplain's flow conveyance capacity, especially in floodways, to be open space/passive recreation areas throughout the County.
- **Policy 9.** Construction of structures that impede water flow in a primary floodplain will be discouraged.
- **Policy 10.** The County will allow lands which are within flood hazard areas, other than primary floodplains, to be developed in accordance with the General Plan and Floodplain Management Ordinance, if mitigation measures are incorporated so as to ensure that the proposed development will not be hazardous within the requirements of the Safety Element (Chapter 4) of this General Plan.
- **Policy 11.** Protect and maintain watershed integrity within Kern County.

Implementation Measures

- **Implementation Measure F.** The County will comply with the Colbey-Alquist Floodplain Management Act in regulating land use within designated floodways.
- **Implementation Measure H.** Development within areas subject to flooding, as defined by the appropriate agency, will require necessary flood evaluations and studies.
- **Implementation Measure I.** Designated flood channels and water courses, such as creeks, gullies, and riverbeds, will be preserved as resource management areas or in the case of urban areas, as linear parks whenever practical.
- **Implementation Measure J.** Compliance with the Floodplain Management Ordinance prior to grading or improvement of land for development or the construction, expansion, conversion or substantial improvements of a structure is required.
- **Implementation Measure N.** Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.

1.9 Resource

Goals

- **Goal 3.** Ensure the development of resource areas minimize effects on neighboring resource lands.

Policies

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

1.10 General Provisions

1.10.6 Surface Water and Groundwater

Policies

- **Policy 34.** Ensure that water quality standards are met for existing users and future development.
- **Policy 39.** Encourage the development of the County's ground water supply to sustain and ensure water quality and quantity for existing users, planned growth, and maintenance of the natural environment.
- **Policy 41.** Review development proposals to ensure adequate water is available to accommodate projected growth.
- **Policy 43.** Drainage shall conform to the Kern County Development Standards and the Grading Ordinance.
- **Policy 44.** Discretionary projects shall analyze watershed impacts and mitigate for construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by the California Environmental Quality Act (CEQA), to prevent the degradation of the watershed to the extent practicable.
- **Policy 46.** In accordance with the Kern County Development Standards, tank truck hauling of domestic water for land developments or lots within new land developments is not permitted.

Implementation Measures

- **Implementation Measure U.** The Kern County Public Health Services Department/Environmental Health Division will develop guidelines for the protection of groundwater quality which will include comprehensive well construction standards and the promotion of ground water protection for identified degraded watersheds.
- **Implementation Measure W.** Applications for General or Specific Plan Amendments will include sufficient data for review to facilitate desirable new development proposals consistent with General Plan policies, using the following criteria and guidelines:
 - i. The provision of adequate water, sewer, and other public services to be used.

- ii. The provision of adequate on-site nonpublic water supply and sewage disposal if no public systems are available or used.
- **Implementation Measure X.** Encourage effective ground water resource management for the long-term economic benefit of the County through the following:
 - i. Promote ground water recharge activities in various zone districts.
 - ii. Support for the development of Urban Water Management Plans and promote Department of Water Resources grant funding for all water providers.
 - iii. Support the development of Ground Water Management Plans.
 - iv. Support the development of future sources of additional surface water and ground water, including conjunctive use, recycled water, conservation, additional storage of surface water and ground water and desalination.
- **Implementation Measure Y.** Promote efficient water use by utilizing measures such as:
 - i. Requiring water-conserving design and equipment in new construction.
 - ii. Encouraging water-conserving landscaping and irrigation methods.
 - iii. Encouraging the retrofitting of existing development with water conserving devices.

Cameron Canyon Specific Plan

It is the purpose of the Land Use, Open Space, and Conservation Element of the Cameron Canyon Specific Plan to designate the general location and distribution of housing, open space, resource land, and other private and public land use.

Section X. Physical Constraints

Goals

- **Goal 1.** To minimize the effects of faulting, slope, flooding, and soil erosion by guiding development away from areas subject to these constraints.
- **Goal 2.** To conserve watershed areas, especially those with erosive soils and steep slopes in open space, as a means of controlling flooding and erosion.
- **Goal 4.** To provide policies regulating development within seismic zones, on steep slopes, with floodplains, and upon erosive soils. These policies will be aimed at achieving the above goals.

Policies

- **Policy 1.** Kern County will not permit new developments to be sited on land which is environmentally unsound to support such development.

- **Policy 2.** Zoning and other land use controls will be used to regulate and, in some instances, to prohibit development in areas with physical hazard constraints.
- **Policy 3.** Special requirements will be applied to new housing within recently active fault zones, in accordance with the Alquist-Priolo Seismic Hazard Act.
- **Policy 5.** Development proposed in areas with steep slopes will be subject to the standards of the Hillside Development Ordinance. Regardless of the percentage of slope, development on hillsides will be required to be sited in the least obtrusive fashion minimizing the extent of topographic alteration.
- **Policy 6.** Permanent development, or any other development that would obstruct water flows and increase flood depths or velocities, shall be prohibited within designated floodways and/or floodplain primary zones. Permanent development within secondary floodplains shall be regulated by the Kern County Floodplain Ordinances.
- **Policy 7.** Development on highly erosive soils shall be limited and measures incorporated in order to reduce erosion potential. The expertise of the Tehachapi Resource Conservation District shall be employed whenever possible to aid in the design of future development of all kinds.

Implementation Measures

- **Implementation Measure 3.** All development within “Zone A” floodplains, as established on the Federal Insurance Administration (FIA) Floodplain Hazard Boundary Maps, shall comply with the requirements of the Kern County Floodplain Ordinances.
- **Implementation Measure 4.** Floodplain zoning shall be applied to all areas within the primary and secondary floodplains of Cache and Oak Creeks.

Kern County Ordinance

Title 17 – Buildings and Construction

Chapter 17.48 – Kern County Floodplain Management

Any construction that takes place within areas of special flood hazards, areas of flood-related erosion hazards, and areas of mudslide (i.e., mudflow) hazards within the jurisdiction of unincorporated Kern County will comply with the requirements and construction design specifications of this ordinance. Any required development permits will be obtained prior to commencement of construction activities; however, the project does not propose any construction or development within a floodplain.

4.10.4 Impacts and Mitigation Measures

Methodology

This section presents the CEQA impact analysis related to potential hydrology and water quality impacts associated with the project. This analysis compares the baseline conditions for the affected environment relevant to hydrology and water quality, as presented above in

Section 4.10.2, *Environmental Setting*, with conditions that would occur due proposed project activities, as well as vested mining activities to assist with analysis of any ancillary permitting requirements for continued mining operations. The analysis utilizes information from sources as cited, including those described in **Section 4.10.1, *Introduction***.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect on hydrology and water quality. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to hydrology and water quality if it would:

- a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:
 - i. result in a substantial erosion or siltation on- or off-site
 - ii. substantially increase the rate of amount of surface runoff in a manner which would result in flooding on-or offsite;
 - iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - iv. impede or redirect flood flows;
- d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Project Impacts

Impact 4.10-1: The project would violate water quality standards or waste discharge requirements.

Potential impacts to water quality, including the potential to violate water quality standards or waste discharge requirements, could occur during project activities, and from releases of stormwater from the project site that contains sediment or other pollutants introduced to surface water flowing through the site. These potential impacts are evaluated further below. Note that the potential for release of hazardous materials and other chemicals used during project activities are addressed in **Section 4.9, *Hazards and Hazardous Materials***.

During ongoing mining operations throughout the life of the mine, storm water controls and BMPs will be implemented as described in the site-specific SWPPP. The SWPPP, or a similar environmental document (if regulatory requirements change over the course of mine life), will specify interim BMPs to ensure erosion and sediment controls are implemented on site (Sespe Consulting 2025g). Upon cessation of vested mining activities, project reclamation would provide for reclamation of most roads and ancillary equipment and facilities, removal of processing facilities within the reclamation plan boundary, and recontouring, stabilization, revegetation, and monitoring of final slopes and disturbed mining areas for use as open space post-reclamation (Sespe Consulting 2025g).

The main storm water channels and sediment ponds constructed during vested surface mining operations will be designed to safely pass the estimated 100-year peak flow (Capital Storm Design Discharge (CSDD)) with erosion control BMPs designed for the 20-year, 1-hour intensity storm event per SMARA regulations. Peak flow for diversion channels (ditches) will be estimated using the 100-year, 1-hour intensity storm event and the rational method per the Kern County Hydrology Manual. A 6-inch freeboard is required for all channels in accordance with Kern County Development Standards (Sespe Consulting 2025g).

Erosion control will primarily be provided by placing riprap in key areas. Large quantities of rock suitable for riprap are anticipated on site. Sediment will be managed through BMP alternatives such as placing rock check dams in the collection channels at select locations. The construction material stockpiles will be graded to promote runoff into the open pits where possible; benches will discourage runoff down the stockpile faces when possible. Runoff directed into the open pits will infiltrate or evaporate; therefore, water accumulation is not expected (with the exception of mining Pit B). Furthermore, the majority of the precipitation falling directly on the construction material stockpiles is expected to seep into the pile before runoff occurs (Sespe Consulting 2025g).

There are several construction material stockpile areas that, in their final condition, would not drain to a sediment pond, diversion ditch, or mining pit due to the localized topography (see green-shaded areas on **Figure 4.10-2, Final Reclamation Drainage Plan**, at **Impact 4.10-3**, below). These areas would employ additional erosion and sediment control measures, which include the installation of straw wattles at the top-of-slope, toe-of-slope, and at 10-foot intervals on the slope face along the contours. In addition, these areas shall be revegetated as described in the approved Reclamation Plan. The proposed Reclamation Plan Amendment includes the proposed seed palette and quantity of seed as recommended in the project Revegetation Plan (ELMT 2026).

The project is subject to all applicable Federal, State, and County water quality regulations. This includes, but is not limited to, required adherence to the Federal CWA, NPDES requirements, the National Flood Insurance Act, requirements of the DWR, the California Fish and Game Code, the California Water Code, Lahontan RWQCB waste discharge requirements, the *Kern County General Plan*, the *Cameron Canyon Specific Plan*, and the Kern County Zoning Ordinance. The project would result in a significant impact to hydrology and water quality if associated project activities create conditions that would result in violation of any water quality or waste discharge standards. Such violations could occur through the creation of erosion, sedimentation, polluted runoff, and/or the accidental release of potentially hazardous

materials required during operational activities. Appropriate BMPs and compliance with applicable regulations would be implemented to reduce potential water quality impacts to a less-than-significant level. Therefore, this impact is considered potentially significant, but with implementation of Mitigation Measures **MM 4.10-1** and **MM 4.10-2** the impact would be less than significant.

Mitigation Measures

MM 4.10-1 At least 30 days prior to commencement of reclamation activities if required, the project proponent/operator shall prepare/maintain a Stormwater Pollution Prevention Plan (SWPPP) onsite. The SWPPP shall be designed to minimize runoff and shall specify best management practices to prevent all pollutants from contacting stormwater, with the intent of keeping sedimentation or any other pollutants from moving off-site and into receiving waters. Recommended best management practices may include:

- a. stockpiling and disposing of material properly;
- b. protecting existing storm drain inlets and stabilizing disturbed areas;
- c. implementing erosion controls;
- d. properly managing reclamation materials; and
- e. managing waste, controlling litter, and implementing sediment controls.

Should a SWPPP not be required by the Regional Water Quality Control Board—Lahontan Region, documentation stating such shall be presented to the Kern County Planning and Natural Resources Department.

MM 4.10-2 At least 30 days prior to commencement of reclamation activities, the project proponent/operator shall prepare/amend and have available on site, a Spill Prevention Control and Countermeasures Plan. A copy of the Spill Prevention Control and Countermeasures Plan shall be provided to the Kern County Planning and Natural Resources Department.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.10-1** and **MM 4.10-2**, impacts would be less than significant.

Impact 4.10-2: The project would substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

The source of water for the project will be groundwater extracted from five (5) of the seven (7) existing wells, summarized in Section 4.10.2 above. These existing water supply wells have been in service for many years, with well construction dates ranging from 1954 to 2013. CalPortland provided Sespe with monthly metered groundwater production and consumption data for the period January 2019 through December 2024. The dataset includes well-specific production volumes and categorized site-wide consumption values (e.g., process water, potable

water, batch plant use, and water truck distribution). Based on this dataset, Sespe calculated that the average annual groundwater production across all existing wells is approximately 225.1 acre-feet. Excluding production from PWS Wells 5 and 6, which supply potable water and are not used for mining or reclamation (Well 5 serves as a backup to Well 6), the remaining five (5) wells yielded an average of approximately 212.1 acre-feet to support mining and reclamation during that same period (Sespe Consulting 2025a).

Of the five (5) wells supplying the project, three (3) (Big Meadow 5, Solar Well B2, and Solar Well B9) are located within the Fremont Valley Groundwater Basin. Based on aquifer storage estimates and the reported annual pumping volumes for the five-year period of record (October 2019 to September 2024), these wells account for a combined withdrawal of 165.1 acre-feet per year. The Fremont Valley Groundwater Basin is unadjudicated and has an estimated aquifer storage capacity of approximately 4,800,000 acre-feet (DWR, 1975), indicating a negligible impact from this level of withdrawal (Sespe Consulting 2025a).

Quarry Well R4-WE1 and R4-WE2 are located within the mapped boundary of the Antelope Valley Groundwater Basin; however, well completion records confirm that both are screened entirely within fractured bedrock, not within the alluvial aquifer materials that define the basin under Bulletin 118. The average combined annual withdrawal from these wells are approximately 47.0 acre-feet, and maximum combined annual withdraw over the 5-year period of record was 87 acre-feet which is considerably less than the estimated maximum allowable withdrawal of 110 acre-feet per year, calculated by applying the adjudicated native safe yield of 0.14 acre-feet per acre per year to the roughly 800 acres of the project area that overlie the Antelope Valley Groundwater Basin. Furthermore, this average annual withdrawal represents just 0.00007 percent of the basin's total storage capacity, estimated between 68 and 70 million acre-feet (Sespe Consulting 2025a).

Given the small scale of projected water use relative to the available aquifer storage and the location and construction of the wells, the project would not substantially deplete groundwater supplies or interfere with sustainable groundwater management within the Fremont Valley or Antelope Valley Groundwater Basins (Sespe Consulting 2025a) and impacts would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.10-3: The project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion and/or sedimentation on-site or off-site.

The topography at the project site varies greatly, containing steep ridgelines, rocky hillsides, desert scrubland, rolling hills, and desert washes. The elevations at the site range from approximately 3,420 to 6,085 feet above mean sea level (amsl). The site is located adjacent to the foothills of the Tehachapi Mountains, along the western edge of the arid Mojave Desert. Typical patterns of precipitation are winter rains and summer thunderstorms, which tend to be of short duration and high intensity (Sespe Consulting 2025g). The project site is located within the Willow Springs Hydrologic Area of the Antelope Hydrologic Unit. The project area has no perennial streams or bodies of water; and contains several seasonal/intermittent drainages. Oak Creek is an intermittent stream with a drainage course that flows around the north and easternmost sides of the project site and then southeast towards the Antelope Valley. Major drainage in the project area is primarily to the southeast toward the Oak Creek drainage. An unnamed wash crosses the central portion of the project site, running subparallel to Tehachapi-Willow Springs Road and flowing to the southeast. Runoff on the northernmost side of the project area is via a series of gullies or channels, which direct surface flows to the Oak Creek channel that runs adjacent to the northern border of the site, along Oak Creek Road. Runoff from the eastern half of the project site generally flows south and east; ephemeral drainages flow to Oak Creek, east of the site. Runoff from the majority of the western half of the project site flows south and east to an unnamed ephemeral channel that runs adjacent to Tehachapi-Willow Springs Road. The confluence of the unnamed channel and Oak Creek is approximately 5 miles southeast of the project site (Sespe Consulting 2025g).

A Final Reclamation Drainage Plan for reclaimed conditions has been developed as a guide for management of site drainage, sediment, and erosion controls during operations and for the post-mining conditions, as presented in **Figure 4.10-2, Final Reclamation Drainage Plan**. The reclaimed site conditions are evaluated based on the site facilities and anticipated conditions of the mine pits and construction material stockpiles. Any changes in flow volumes in the downstream ephemeral drainages are not evaluated because the existing operations are part of an existing vested surface mining facility, thus changes in flow volumes compared to the existing and/or future mining conditions are not applicable to this analysis (Sespe Consulting 2025g).

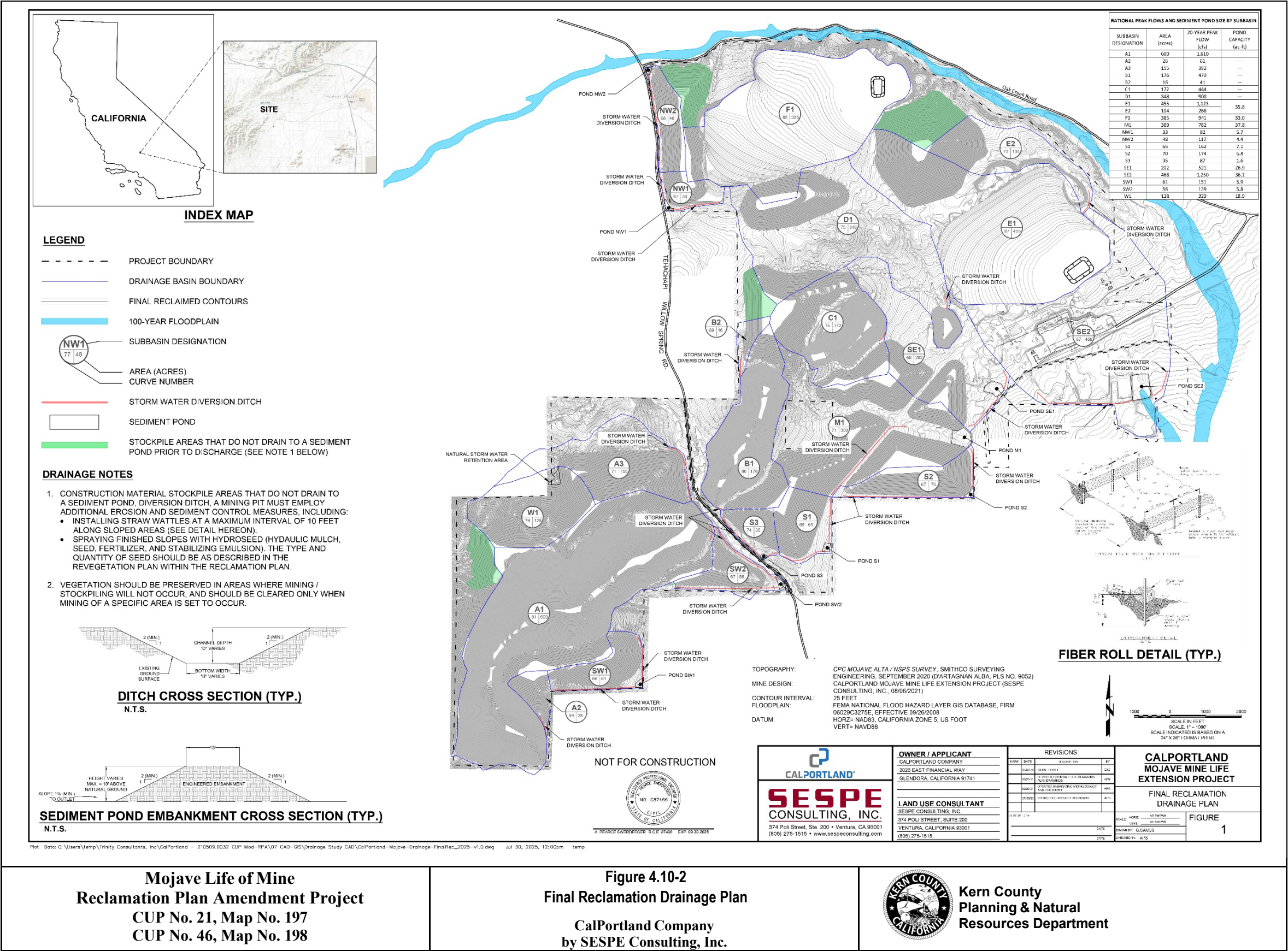
The contributing watersheds for the diversion ditches around the construction material stockpile areas may change frequently over the life of the mine due to the phased development of the stockpiles and open pits. The Final Reclamation Drainage Plan was developed based on Sespe Consulting's (2025g) analysis of the watershed subbasins during the post-mining periods. The sediment pond capacities are sized based on post-mining configuration; however, it is possible that the ponds may need to be expanded during vested mining operations to meet the runoff control criteria in the Drainage Plan (Sespe Consulting 2025g).

For the drainage study, the reclamation site configuration was divided into 21 drainage basins as shown on **Figure 4.10-2, Final Reclamation Drainage Plan**, above. The mining pits and stockpile layouts were used to delineate the drainage basins expected to contribute runoff from the project area, with post-mining drainage basins delineated assuming that the diversion ditches are constructed as shown in **Figure 4.10-2**. Peak runoff resulting from the 20-year and 100-year storm events was calculated for each of the drainage basins. Runoff curve number (CN) values were assigned to each basin based on a soil survey of the site and TR-55 tables. NOAA Atlas 14 Precipitation-Frequency estimates were used to determine the precipitation for the 100-year, 1-hour point rainfall and the 20-year, 1-hour point rainfall which were used to determine the Intensity-Duration Curves used in the Rational Method. For each basin, a conservative time of concentration (Tc) of five (5) minutes was assumed. The basin areas and composite CN values were used with the Kern County Rational Method to determine the post-mining peak runoff (Sespe Consulting 2025g).

The following criteria were used for the Kern County Rational Method for the site:

- Precipitation for the storm events was obtained from NOAA Atlas 14 (NOAA 2014);
- 100-year, 1-hour point rainfall of 1.24 inches along with a slope of 0.55 on a log-log graph was used to determine Intensity-Duration Curve used in the Rational Method for 100-year peak runoff;
- 20-year, 1-hour point rainfall of 0.876 inches along with a slope of 0.55 on a log-log graph was used to determine Intensity-Duration Curve used in the Rational Method for erosion control facilities;
- 10-year, 24-hour point rainfall of 3.41 inches was used for sediment pond volume calculations based on basin yield per Kern County procedure;
- The Multiday Rainfall Mass Ratio of 1.44 was used to estimate the 10-year, 5-day runoff volume from the calculated 10-year, 24-hour runoff volume;
- Runoff CN values were selected based on soil types; and
- A conservative time of concentration (Tc) of 5 minutes was used for each subbasin (Sespe Consulting 2025g).

The resulting values for runoff calculations are shown in **Table 4.10-2, Drainage Subbasins and Sediment Pond Capacity with Reclaimed Conditions**.



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Table 4.10-2 Drainage Subbasins and Sediment Pond Capacity with Reclaimed Conditions

Drainage Subbasin ID¹	Sediment Pond Location	Basin Area (acres)	20-year Peak Flow (cfs)	100-year Peak Flow (cfs)	Min. Sediment Pond Capacity (af)
A1	See Note 2	599.7	1,610	2,455	See Note 2
A2	See Note 2	25.7	61	97	See Note 2
A3	See Note 2	154.8	392	610	See Note 2
B1	See Note 2	176.3	470	719	See Note 2
B2	See Note 2	16.3	41	64	See Note 2
C1	See Note 2	171.8	444	686	See Note 2
D1	See Note 2	348.1	900	1,391	See Note 2
E1	Within the backfilled Pit E, southeast side of the pit.	454.7	1,123	1,764	55.8
E2	Within the backfilled Pit E, southeast side of the pit.	104.0	266	413	55.8
F1	Within the backfilled Pit F, east side of the pit.	384.9	941	1,483	33.0
M1	Adjacent to the eastern project boundary, east of Pit B and south of Pit D.	308.9	782	1,218	37.8
NW1	Adjacent to Tehachapi Willow Springs Road along the western project boundary, southwest of Pit F.	33.2	82	129	5.7
NW2	Adjacent to Tehachapi Willow Springs Road, at the northwest corner of the project site.	47.6	117	184	4.4
S1	Southeast side of the site, southeast of Pit B.	64.6	162	253	7.1
S2	Southeast corner of the site, east of Pit B and south of Pit D.	70.3	174	273	6.8
S3	Adjacent to Tehachapi Willow Springs Road, at the southern edge of the project site.	35.0	87	136	1.6
SE1	Adjacent to the eastern project boundary, southeast of Pit D.	202.0	521	805	26.9
SE2	Eastern side of the site, south of the Plant area, designed location coincides with existing sediment pond location.	467.5	1,250	1,909	36.1
SW1	Southwest corner of the site, southeast of Pit A.	61.3	151	237	5.9
SW2	Southern side of the site, east of Pit A and south of Pit B, along the south side of Tehachapi Willow Springs Road.	56.1	139	218	5.8
W1	Natural low area along the western side of the site.	127.8	329	510	18.9

Source: Sespe Consulting 2025g.

Notes:

1. Locations identification numbers (ID) shown on **Figure 4.10-2**.
2. Subbasins without a "Minimum Sediment Pond Capacity" shown drain to internal mining pits or natural low areas that will contain, at a minimum, the runoff generated from the 10-year, 5-day storm. Therefore, no additional sediment ponds are required to meet the criteria set forth in the Sespe Consulting (2025g) Drainage Report. Since Pits E and F will be backfilled, sediment pond capacity requirements have been specified above.

Where topographically feasible, runoff from disturbed areas will be diverted directly into the mining pits. For areas where it is not possible to direct water into the pits, runoff will be collected in sediment ponds. As mining operations progress, temporary sediment ponds may be required. Requirements and locations for such ponds will be determined as part of the ongoing mine design and operation and will be implemented through, and incorporated into, the site's SWPPP. Final configuration of the sediment ponds may incorporate a combination of excavation and fill during vested mining operations in order to meet the required capacity. Ponds will be constructed with an emergency spillway sized to pass the peak flow of the 100-year storm in the event of a major storm occurring while ponds are full or the outlet pipe does not function as designed. The embankment design will have a configuration of 2H:1V upstream and downstream slopes with a 15-foot-wide access road along the crest. The embankments will also be engineered and designed to current applicable standards and sized to avoid classification as jurisdictional dams under the California Department of Water Resources Division of Safety of Dams statutes. Storm water flow from large storms or successive storms that exceed the design capacity will be routed through the sediment ponds via an emergency spillway protected with riprap (Sespe Consulting 2025g).

Sediment pond design capacity requirements were calculated based on the Intermediate Storm Design Discharge (ISDD) five (5) day design storm runoff volumes. Sediment ponds are required for subbasins where runoff cannot be routed to the mining pits. Sediment ponds would be constructed in accordance with the design specifications included in the Drainage Report (Sespe Consulting 2025g) as part of vested mining operations prior to the approval of final reclamation conditions by the County of Kern and DMR. The sediment ponds will remain in place for use in storm water management following reclamation and will be allowed to naturally fill with captured sediment over time (Sespe Consulting 2025g). The sediment pond locations and estimated required required capacities are summarized in **Table 4.10-2**, above.

Excess construction aggregate materials that are not processed and sold as aggregate prior to the termination of the mining permit will remain in place as permanent stockpiles within the site. In addition, Pits E and F will be backfilled with excess aggregate materials. The stockpiles and backfilled pit areas will be revegetated to provide longer-term soil stability, reduce visual contrasts, and provide wildlife habitat. Steep slopes and benches in the open pits that are not covered by backfilled topsoil will not be revegetated; however, all runoff from the pit benches will be retained within the pit and will not discharge. In some areas, specifically on the northern portion of the site, it may not be possible to capture all storm water runoff in sediment ponds prior to discharging from the site. In these instances, sediment and erosion control BMPs will be implemented while permanent vegetation is established to mitigate the migration of sediment offsite (Sespe Consulting 2025g).

In summary, the proposed project is not expected to cause any adverse flooding effects on the surrounding properties. The project would be in conformance with Kern County development standards and SMARA performance standards and would meet SMARA §3706 because erosion and sedimentation will be controlled during all phases of construction, operation, reclamation, and closure of the mining operation and erosion control BMPs will be designed for the 20-year, 1-hour peak runoff in accordance with SMARA requirements (Sespe Consulting 2025g). Additionally, in accordance with Kern County Development Standards for drainage, the storm water sediment ponds design will retain the 10-year, 5-day (ISDD) runoff

volumes and safely pass the estimated 100-year, 1-hour peak flow; and diversion ditches and channels will safely carry the 100-year, 1-hour (CSDD) peak flow (Sespe Consulting 2025g).

The proposed design of the construction material stockpiles, along with mitigation measures described in the Drainage Report (Sespe Consulting 2025g) (i.e., storm water diversion ditches/channels and sediment ponds, straw wattles), are expected to sufficiently reduce erosion and sediment issues. The project site is in an area that receives minimal precipitation annually. Where feasible, runoff from the stockpiles will be routed to the mining pits and retained on site, and the high evaporative rate paired with the anticipated coarse nature of the stockpiled material will be sufficient to protect both onsite and downstream beneficial uses of water (as required by SMARA). In addition, erosion and sedimentation control is necessary during all phases of construction, operation, reclamation, and final closure of the mine. As described previously, sediment ponds, diversion ditches, temporary sediment control BMPs, and revegetation are expected to minimize erosion and sedimentation caused by mining operations (Sespe Consulting 2025g).

With implementation of Mitigation Measure **MM 4.10-1**, above, the project impact associated with erosion and sedimentation would be less than significant.

Mitigation Measures

Mitigation Measure **MM 4.10-1**.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.10-1**, impacts would be less than significant.

Impact 4.10-4: The project would substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would substantially increase the rate or amount of surface runoff which would result in flooding on- or off-site.

As discussed under **Impact 4.10-3**, the project would alter the existing drainage patterns of the site. No further encroachment into the existing floodplain is planned during the project. Local drainage within the mining operation will be collected in the designed sediment ponds or within the pits, as discussed under **Impact 4.10-3**. The project's storm water sediment ponds will retain the 10-year, 5-day (ISDD) runoff volumes and will safely pass the estimated 100-year, 1-hour peak flow event; and diversion ditches and channels will safely carry the 100-year, 1-hour (CSDD) peak flow. Thus, the project will not cause any adverse flooding on the project site or surrounding properties (Sespe Consulting 2025g), and this impact would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.10-5: The project would substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

As discussed under Impacts 4.10-3 and 4.10-4, the project includes stormwater facilities to capture and manage stormwater runoff. The project's storm water sediment ponds will retain the 10-year, 5-day (ISDD) runoff volumes and will safely pass the estimated 100-year, 1-hour peak flow event; and diversion ditches and channels will safely carry the 100-year, 1-hour (CSDD) peak flow. Mitigation Measure MM 4.10-1 requires that the project proponent/operator prepare/amend and submit a SWPPP to the Lahontan RWQCB with design to minimize runoff and specify BMPs to prevent all pollutants from contacting stormwater with the intent of keeping sedimentation or any other pollutants from moving off-site and into receiving waters, or demonstrate that a SWPPP is not required by the Lahontan RWQCB. Implementation of Mitigation Measure MM 4.10-1 would reduce this impact to less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.10-1.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.10-1, impacts would be less than significant.

Impact 4.10-6: The project would substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows.

As discussed under Impact 4.10-3 and Impact 4.10-4, the project would alter the existing drainage patterns of the site. No further encroachment into the existing floodplain is planned during the project. Local drainage within the mining operation will be collected in the designed sediment ponds or within the pits. The project's storm water sediment ponds will retain the 10-year, 5-day (ISDD) runoff volumes and will safely pass the estimated 100-year, 1-hour peak flow event; and diversion ditches and channels will safely carry the 100-year, 1-hour (CSDD) peak flow. Thus, the project will not cause any adverse flooding on the project site or surrounding properties (Sespe Consulting 2025g), and this impact would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.10-7: The project would risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones.

The project site is not within a tsunami hazard area or seiche zone and, with the exception of an approximately 8-acre portion of the southeast corner of the site which includes the FP (Floodplain Combining) District per the Kern County Zoning Ordinance, the project site is not located within a designated flood zone. The project would be required to comply with a SWPPP as specified in Mitigation Measure **MM 4.10-1**, and any waste generated by the proposed project would be disposed of in accordance with all applicable Federal, State, and local regulations. A Spill Prevention Control and Countermeasures Plan (SPCC) would also be maintained onsite, as required under the Federal Oil Pollution Act, and implemented to respond to an oil spill, if one were to occur at the project site, as specified in Mitigation Measure **MM 4.10-2**. No hazardous waste is expected to be generated from the project reclamation; however, in the case of a fuel spill or release of other hazardous material during project activities, the waste would be removed from the project site by a certified contractor. Therefore, this impact would be less than significant.

Mitigation Measures

Implement Mitigation Measure **MM 4.10-1**.

Level of Significance after Mitigation

With implementation of Mitigation Measure **MM 4.10-1**, impacts would be less than significant.

Impact 4.10-8: The project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Ground-disturbing activities associated with the project could potentially degrade water quality through erosion and subsequent sedimentation of drainages. Additionally, accidental release of potentially harmful materials, such as engine oil and diesel fuel, could degrade the water quality of nearby streams. As discussed under **Impact 4.10-1**, preparation of and compliance with a SWPPP (**MM 4.10-1**) and a Spill Prevention Control and Countermeasures Plan (**MM 4.10-2**) would reduce potential impacts to be less than significant.

The project site is situated within the jurisdictional boundaries of the Lahontan Region Basin Plan, which establishes surface and groundwater standards for the region according to designated beneficial uses. The Lahontan Region Basin Plan summarizes applicable provisions of separate SWRCB and RWQCB planning and policy documents, and of water quality management plans adopted by other federal, state, and regional agencies. The project's water use for dust control would be consistent with the Lahontan Region Basin Plan and would not create a conflict with the plan.

Therefore, with implementation of Mitigation Measures **MM 4.10-1** and **MM 4.10-2** this impact would be less than significant.

Mitigation Measures

Implement Mitigation Measures **MM 4.10-1** and **MM 4.10-2**.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.10-1** and **MM 4.10-2**, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Section 3.7, *Cumulative Effects Overview*, of this EIR discusses cumulative projects near the project. (**Table 3-15, *Cumulative Projects List***, in **Chapter 3, *Project Description***, lists specific projects considered in the cumulative impact analysis.) The geographic area for cumulative impacts to hydrology and water quality includes the local ephemeral drainages, watershed, and the local groundwater basin. Potential hydrology and water quality impacts associated with the project activities, including water quality degradation due to erosion, sedimentation, or the release of hazardous materials, would be limited to this geographic area.

Impact 4.9-9: The project would contribute to cumulative hydrology and/or water quality impacts.

There are no current or proposed projects in the geographic area of the project that would cumulatively contribute to the violation of any water quality standards or waste discharge requirements. Cumulative projects are not expected to result in substantial depletion of groundwater supplies or interference with groundwater recharge, alteration of existing drainage patterns in a manner which would result in substantial runoff/erosion/siltation, or substantial flooding or creation or contribution of stormwater runoff. No cumulative impacts would occur; therefore, no additional mitigation measures are proposed.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

No Impact would occur.

Section 4.11

Land Use and Planning

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4.11.1 Introduction

This section of the Environmental Impact Report (EIR) addresses potential land use impacts that would result from the project. The following discussion addresses existing environmental conditions in the affected environment, evaluates the project's consistency with applicable goals and policies, identifies and analyzes potential environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from project implementation where applicable.

For this analysis of potential impacts associated with land use and planning, baseline conditions are the anticipated future project site condition at the completion of vested mining pursuant to the mine plan discussed in Chapter 3 and illustrated on **Figure 3-7, Proposed Maximum Extent of Excavation**, in **Chapter 3**. Impacts of the project (i.e., reclamation) are assessed against the future mined condition baseline.

4.11.2 Environmental Setting

Regional Setting

The proposed project is located in an unincorporated area of the southeastern part of unincorporated Kern County, approximately 6 miles southeast of the City of Tehachapi and 7.25 miles west of the unincorporated community of Mojave. The project area is situated in the Mojave Desert on the southeastern edge of the Tehachapi Mountains (**Figure 3-1, Site Vicinity**).

Local Setting

The proposed project site is located in the Mojave Desert on the southeastern edge of the Tehachapi Mountains. The elevation of the project area ranges from approximately 3,420 to 6,085 feet above mean sea level (amsl). Oak Creek Road runs east-west along the project site's northern boundary. Tehachapi Willow Springs Road runs north-south along a portion of the project site's western boundary and bisects the southwestern portion of the project site.

The surrounding land uses consist of open space, dispersed rural residences, renewable energy generation (i.e., wind turbines and solar facilities), and other mining and industrial uses. Sensitive receptors located in the vicinity of the project site consist of rural residential dwellings located at varying distances from the proposed project site. The nearest identified sensitive receptors include a residence located 5,400 feet south of the project site west of Tehachapi Willow Springs Road, a residence located approximately 5,500 feet northwest of the project site adjacent to Tehachapi Willow Springs Road, a residence located approximately 6,450 feet north of the project site adjacent to Cameron Canyon Road, and residence/commercial facility located approximately 7,400 feet south of the project site west

of Tehachapi Willow Springs Road. The Pacific Crest Trail at its nearest point is approximately 600 feet northwest of the northwest corner of the project site near the Tehachapi Willow Springs Road / Oak Creek Road intersection.

An approximately 40-acre parcel of land under federal ownership administered by the U.S. Bureau of Land Management (BLM) is located centrally within the exterior boundaries of the project site, however it is not part of the project site. Nothing about the BLM access rights to their aforementioned parcel (the northeast quarter of the northwest quarter of Township 11 North, Range 14 West (T11N, R14W), San Bernardino Base and Meridian (SBB&M)) will be changed because of the proposed project.

The project proponent acquired the majority of the project site properties in 1953 and commenced surface mining operations and cement production in 1954. Mining and cement plant operations have been ongoing since that time. Approximately 852 acres of the site have been disturbed by previous and ongoing site operations and other disturbances associated with dirt roads, wind turbine development, and areas impacted by wildfire in 2006 and 2011. A total of 22 wind turbines are located on the project site. Of those 22 wind turbines, cement plant operations utilize eight (8) 3-megawatt (MW) onsite wind turbines owned by the project proponent comprising a 24-MW wind turbine electrical generation facility (the northernmost eight turbines in Section 23, Township 11 North, Range 14 West (T11N, R14W), San Bernardino Base and Meridian (SBB&M)). The remaining fourteen (14) onsite wind turbines supply energy exclusively to the electrical grid. Additional wind turbines are also located offsite in the surrounding area.

The project site varies in topography, containing steep ridgelines, rocky hillsides, desert scrubland, rolling hills, and desert washes. Project site terrain west of Tehachapi Willow Springs Road includes a mountainous ridgeline transitioning into a lower ridgeline running generally from the northeast corner near the existing mined areas to the southwest. Rolling hills and valleys occur on either side of this portion of the ridgeline.

The project site is approximately 4,367 acres, wholly or within a portion of sixteen privately owned parcels identified as Kern County Assessor's Parcel Numbers (APNs):

237-032-01	237-071-04	237-091-01	237-091-17
237-053-01	237-071-07	237-091-02	237-093-01
237-071-02	237-073-01	237-091-04	237-101-06
237-071-03	237-073-02	237-091-05	237-102-01

The project site is subject to the *Kern County General Plan*, the *Cameron Canyon Specific Plan*, and the Kern County Zoning Ordinance. The project site is comprised of the following Kern County General Plan map code designations: 7.3 (Heavy Industrial), 7.3/2.4 (Heavy Industrial - Steep Slope), 7.3/2.5 (Heavy Industrial – Flood Hazard), 8.2 (Resource Reserve), 8.2/2.4 (Resource Reserve – Steep Slope), 8.4 (Mineral and Petroleum), 8.4/2.4 (Mineral and Petroleum – Steep Slope), 8.4/2.5 (Mineral and Petroleum – Flood Hazard), and 8.5/2.4 (Resource Management – Steep Slope). The project site is comprised of the following *Cameron Canyon Specific Plan* map code designations: 8.2 (Resource Reserve), 8.2/2.5 (Resource Reserve – Flood Hazard), 8.2/2.6 (Resource Reserve – Erosion Hazard), 8.4/2.4 (Mineral and

Petroleum – Steep Slope), and 8.4/2.6 (Mineral and Petroleum – Erosion Hazard). (**Table 4.11-1, Existing Uses, Zoning, and Land Use Designations**; **Figure 4.11-1, Existing General/Specific Plan Designations**).

Kern County zoning districts within the project site are: A (Exclusive Agriculture), A WE (Exclusive Agriculture, Wind Energy Combining), A-1 (Limited Agriculture), A-1 FP (Limited Agriculture, Floodplain Combining), A-1 WE (Limited Agriculture, Wind Energy Combining), M-3 (Heavy Industrial), M-3 FP (Heavy Industrial, Floodplain Combining), M-3 WE (Heavy Industrial, Wind Energy Combining), E(20) RS (Estate – 20 acres, Residential Suburban Combining), NR(20) (Natural Resource – 20 acres), and FPP (Floodplain Primary). (**Figure 4.11-2, Existing Zone Classifications**).

Definitions of land use designations and zoning classifications are provided below.

Kern County General Plan Map Provisions

Map Code 2.4 Physical and Environmental Constraint – Steep Slope

Land with an average slope of 30% or steeper.

Map Code 2.5 Physical and Environmental Constraint – Flood Hazard

Special Flood Hazard Areas (Zone A), as identified on the Flood Insurance Rate Maps (FIRM) of the Federal Emergency Management Agency (FEMA) and supplemented by floodplain delineating maps that have been approved by the Kern County Engineering and Survey Services Department.

Map Code 7.3 – Heavy Industrial

Large-scale industrial activities that are incompatible with other land uses because of potential severe environmental impacts and/or high employee densities. Uses shall include, but are not limited to, the following: Manufacturing, assembling and processing activities, transportation facilities, material and equipment storage, sawmills, foundries, refineries, and petroleum product storage.

Map Code 8.2 – Resource Reserve

Areas of mixed natural resource characteristics, such as rangeland, woodland, and wildlife habitat which occur within an established County water district. Minimum parcel size is 20 acres gross, except lands subject to a Williamson Act Contract/Farmland Security Zone Contract, in which case the minimum parcel size shall be 80 acres gross. Uses shall include, but are not limited to, the following: Livestock grazing; dry land farming; ranching facilities; wildlife and botanical preserves; and timber harvesting; one single-family dwelling unit; irrigated croplands; water storage or groundwater recharge areas; mineral; aggregate; and petroleum exploration and extraction; recreational activities, such as gun clubs and guest ranches; and land within development areas subject to significant physical constraints.

Table 4.11-1 Existing Uses, Zoning, and Land Use Designations

APN	Existing Land Use	Kern County General Plan / Cameron Canyon Specific Plan Map Code Designation	Existing Zoning
237-032-01	Vested mining operation, active evaporation pond which receives discharge from a water softener unit and two cooling towers, formerly operated cement kiln dust slurry impoundments, renewable energy generation (wind), concrete batch plant, undeveloped land	7.3, 7.3/2.5	M-3, M-3, FP, M-3 WE, M-3, FP WE, A-1, A-1 WE, A-1 FP
237-053-01	Vested mining operation, formerly operated cement kiln dust slurry impoundments, renewable energy generation (wind), undeveloped land	7.3, 7.3/2.5	M-3, M-3 FP, M-3 WE, M-3 FP WE
237-071-02	Vested mining operation, renewable energy generation (wind), undeveloped land	8.2, 8.4, 8.4/2.4 8.2 (Cameron Canyon S.P.) 8.2/2.5 (Cameron Canyon S.P.), 8.2/2.6 (Cameron Canyon S.P.), 8.4/2.4 (Cameron Canyon S.P.), 8.4/2.6 (Cameron Canyon S.P.),	A, A WE, E (20), E(20) RS, E (20) RS WE, NR(20), FPP
237-071-03	Vested mining operation, undeveloped land	8.4, 8.4/2.4, 8.4/2.5 8.2/2.5 (Cameron Canyon S.P.), 8.2/2.6 (Cameron Canyon S.P.), 8.4/2.4 (Cameron Canyon S.P.), 8.4/2.6 (Cameron Canyon S.P.),	A, A-1, NR(20), FPP
237-071-04	Vested mining operation, undeveloped land	8.4, 8.4/2.4 8.4/2.4 (Cameron Canyon S.P.), 8.4/2.6 (Cameron Canyon S.P.),	A-1, NR(20), A WE
237-071-07	Vested mining operation, renewable energy generation (wind), undeveloped land	8.4, 8.4/2.4, 8.4/2.5	A-1, A WE
237-073-01	Vested mining operation, Mojave Cement Plant, formerly operated cement kiln dust slurry impoundments (a portion of which is currently being used for storage in conjunction with the vested mining operation and Mojave Cement Plant), 15-acre landfill that formerly received construction debris and refractory kiln brick (a portion of which is currently being used for storage in conjunction with the vested mining operation and Mojave Cement Plant), undeveloped land	7.3, 7.3/2.4	M-3, M-3 WE
237-073-02	Vested mining operation, renewable energy generation (wind), undeveloped land	8.4, 8.4/2.4	A-1, A WE
237-091-01	Vested mining operation, renewable energy generation (wind), undeveloped land	8.2, 8.2/2.4, 8.4, 8.4/2.4	A, A WE
237-091-02	Vested mining operation, undeveloped land	8.4, 8.4/2.4	A, A WE, A-1
237-091-04	Vested mining operation, undeveloped land	8.4, 8.4/2.4	A, A WE
237-091-05	Vested mining operation, undeveloped land	8.4	A, A WE
237-091-17	Vested mining operation, renewable energy generation (wind), undeveloped land	8.4	A WE, A-1, A-1 WE

Table 4.11-1 Existing Uses, Zoning, and Land Use Designations

APN	Existing Land Use	Kern County General Plan / Cameron Canyon Specific Plan Map Code Designation	Existing Zoning
237-093-01	Vested mining operation, undeveloped land	8.5/2.4	A
237-101-06	Vested mining operation, undeveloped land	8.2/2.4	A
237-102-01	Vested mining operation, undeveloped land	8.3, 8.5/2.4	A
Surrounding Parcels			
North	Oak Creek Road, Renewable Energy Generation (wind), Vacant Land	8.2, 8.2/2.4, 8.4, 8.4/2.4, 8.4/2.5, 8.5 8.2 (Cameron Canyon S.P.), 8.2/2.5 (Cameron Canyon S.P.), 8.2/2.6 (Cameron Canyon S.P.), 8.4/2.6 (Cameron Canyon S.P.),	A, A WE, A-1, FPP, M-3, M-3 WE
South	Renewable Energy Generation (wind), Vacant Land	1.1, 8.3, 8.4, 8.5, 8.5/2.4, 7.3, 7.3/2.5	A, A WE, A-1, A-1 WE, E(2½) RS, E(20) RS, M-3, M-3 WE
East	Renewable Energy Generation (wind and solar), Vacant Land	1.1, 7.3, 7.3/2.5, 8.4, 8.4/2.4, 8.4/2.5, 8.5	A WE, A-1, A-1 WE, FPP, M-3, M-3 WE,
West	Renewable Energy Generation (wind), Vacant Land	1.1, 8.2, 8.2/2.4, 8.4, 8.5/2.4 8.2 (Cameron Canyon S.P.), 8.2/2.5 (Cameron Canyon S.P.), 8.2/2.6 (Cameron Canyon S.P.),	A, A WE, E(10), E(20) RS, FPP

Notes:*Kern County Zoning District:*

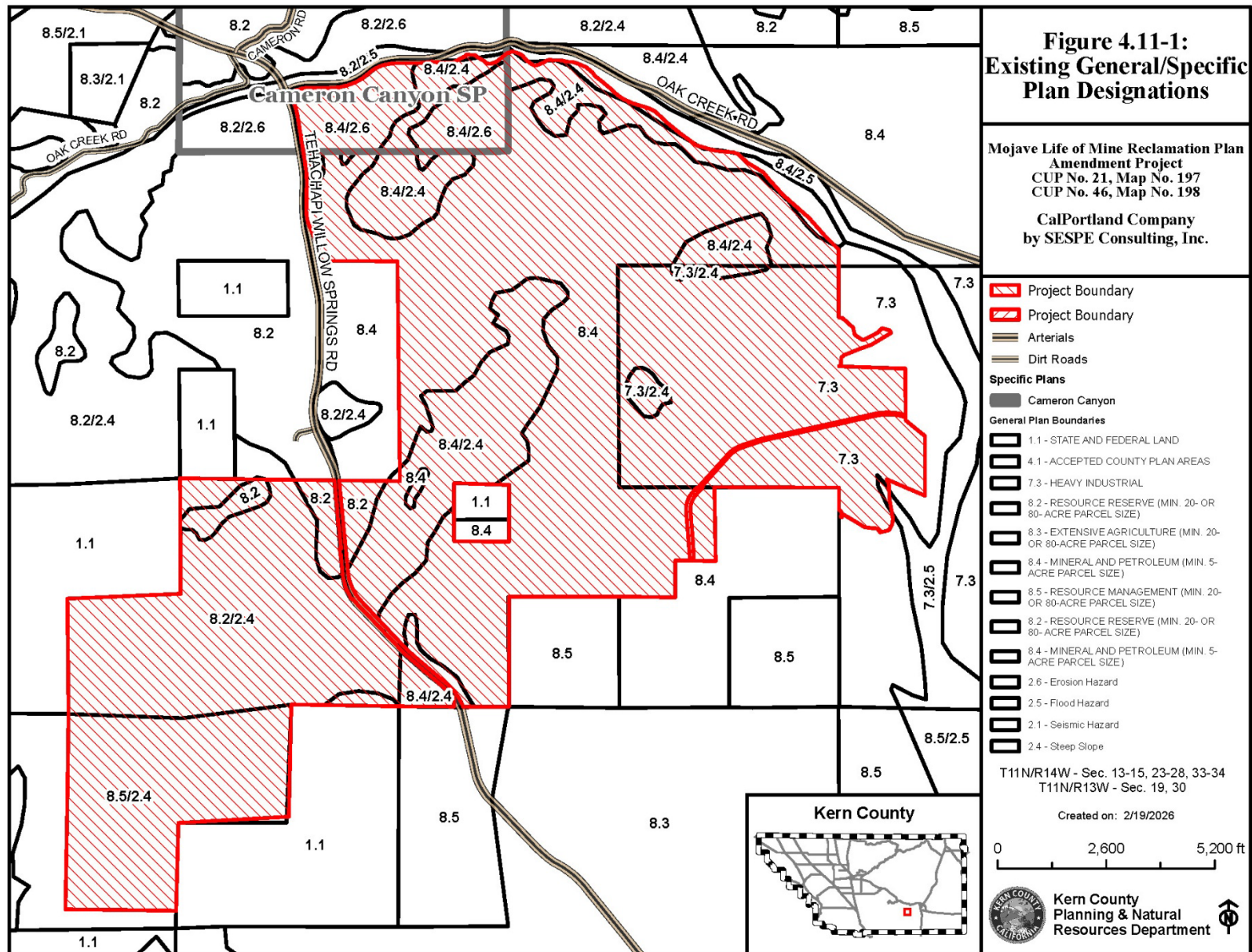
A (Exclusive Agriculture)
A WE (Exclusive Agriculture, Wind Energy Combining)
A-1 (Limited Agriculture)
A-1 FP (Limited Agriculture, Floodplain Combining)
A-1 WE (Limited Agriculture, Wind Energy Combining)
M-3 (Heavy Industrial)
M-3 FP (Heavy Industrial, Floodplain Combining)
M-3 WE (Heavy Industrial, Wind Energy Combining)
E(2½) RS (Estate – 2½ acres, Residential Suburban Combining)
E(10) (Estate – 10 acres)
E(20) RS (Estate – 20 acres, Residential Suburban Combining)
NR(20) (Natural Resource – 20 acres)
FPP (Floodplain Primary)

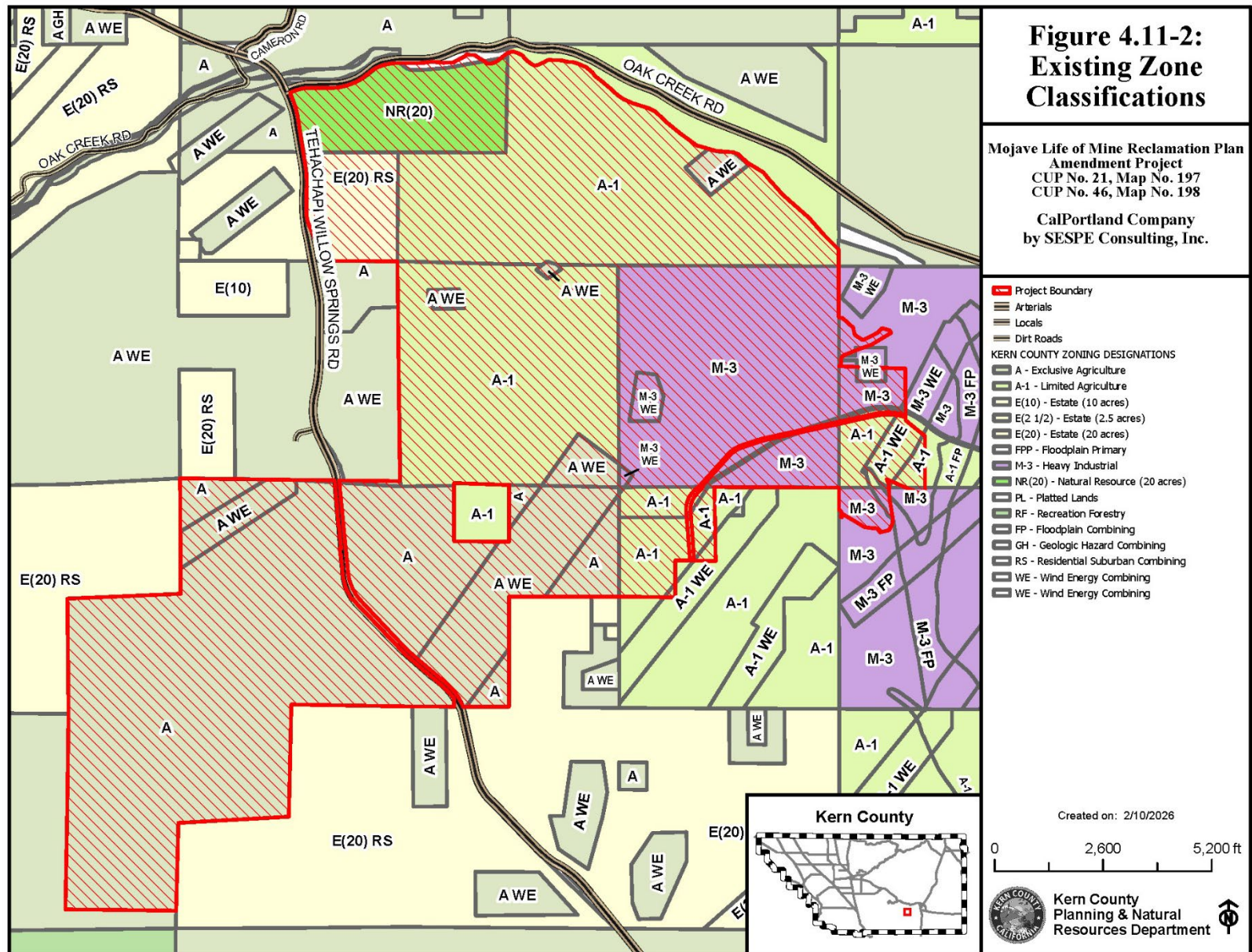
Kern County General Plan (KCGP) Map Code Designation:

1.1 (State and federal land)
7.3 (Heavy Industrial) 7.3/2.4 (Heavy Industrial - Steep Slope)
7.3/2.5 (Heavy Industrial – Flood Hazard)
8.2 (Resource Reserve)
8.2/2.4 (Resource Reserve – Steep Slope)
8.3 (Extensive Agriculture)
8.4 (Mineral and Petroleum)
8.4/2.4 (Mineral and Petroleum – Steep Slope)
8.4/2.5 (Mineral and Petroleum – Flood Hazard)
8.5 (Resource Management)
8.5/2.4 (Resource Management – Steep Slope)

Cameron Canyon Specific Plan (CCSP) Map Code Designation:

8.2 (Resource Reserve)
8.2/2.5 (Resource Reserve – Flood Hazard)
8.2/2.6 (Resource Reserve – Erosion Hazard)
8.4/2.4 (Mineral and Petroleum – Steep Slope)
8.4/2.6 (Mineral and Petroleum – Erosion Hazard)





Map Code 8.3 – Extensive Agriculture

Agricultural uses involving large amounts of land with relatively low value-per-acre yields, such as livestock grazing, dry land farming, and woodlands. Minimum parcel size is 20 acres gross, except lands subject to a Williamson Act Contract/ Farmland Security Zone Contract, in which case the minimum parcel size shall be 80 acres gross. Uses shall include, but are not limited to, the following: Livestock grazing; dry land farming; ranching facilities; wildlife and botanical preserves; and timber harvesting; one single-family dwelling unit; irrigated croplands; water storage or groundwater recharge areas; mineral; aggregate; and petroleum exploration and extraction; and recreational activities, such as gun clubs and guest ranches; and land within development areas subject to significant physical constraints.

Map Code 8.4 – Mineral and Petroleum

Areas which contain producing or potentially productive petroleum fields, natural gas, and geothermal resources, and mineral deposits of regional and Statewide significance. Uses are limited to activities directly associated with the resource extraction. Minimum parcel size is 5 acres gross. Uses shall include, but are not limited to, mineral and petroleum exploration and extraction, including aggregate extraction; extensive and intensive agriculture; mineral and petroleum processing (excluding petroleum refining); natural gas and geothermal resources; pipelines; power transmission facilities; communication facilities; equipment storage yards; and borrow pits.

Map Code 8.5 – Resource Management

Primarily open space lands containing important resource values, such as wildlife habitat, scenic values, or watershed recharge areas. These areas may be characterized by physical constraints, or may constitute an important watershed recharge area or wildlife habitat or may have value as a buffer between resource areas and urban areas. Other lands with this resource attribute are undeveloped, non-urban areas that do not warrant additional planning within the foreseeable future because of current population (or anticipated increase), marginal physical development, or no subdivision activity.

Cameron Canyon Specific Plan Map Provisions***Map Code 2.4 (Steep Slope)***

Land within an Alquist-Priolo Special Study Zone as shown on the Kern County Seismic Hazard Atlas and State Geologic Maps.

Map Code 2.5 (Flood Hazard)

Special Flood Hazard Area (Zone A) as identified on the Flood hazard Boundary Maps of the U.S. Department of Housing and Urban Development (June 28, 1978) and supplemented by generalized floodplain delineation maps that have been prepared by the Kern County Water Agency. The Flood hazard Boundary Maps will ultimately be superseded by maps presently being prepared under the Federal Flood Insurance Administration Rate Study Program. The plan will be amended to reflect the most up-to-date floodplain information, as necessary.

Map Code 2.6 (Erosion Hazard)

Soils identified as having very high or high erosion potential by the “Soil Survey of Kern County California, Southeastern Part” prepared by the Soil Conservation Service. Because of the map scale, small areas of different soils may be included within areas of the specific soil. This constraint identifies potentially erosive soils only; it does not address other soil limitations.

Map Code 8.2

Areas of mixed natural resource characteristics, such as rangeland, woodland, and wildlife habitat, which occur within an established County water district. Minimum parcel size of 20 acres gross. Consistent zoning includes the A (Exclusive Agricultural) and OS (Open Space) zones and the WE (Wind Energy Combining) overlay.

Permitted uses shall include, but are not limited to, the following

Primary: Livestock grazing, wind-energy sites, ranching facilities, wildlife and botanical preserves; one single-family dwelling unit.

Compatible: Recreational activities such as gun clubs and guest ranches.

Map Code 8.4

Areas which contain producing, or potentially productive, petroleum fields and mineral deposits. Uses are limited to activities directly associated with the resource extraction. Minimum parcel size is 5 acres gross.

Permitted uses shall include, but are not limited to, the following:

Primary: Mineral and petroleum exploration and extraction.

Compatible: Extensive and intensive agriculture, mineral and petroleum processing (excluding petroleum refining), pipelines, power transmission facilities, communication facilities, equipment storage yards, borrow pits, night watchman or crew quarters, or one single-family dwelling unit.

Kern County Zoning Classifications***A – Exclusive Agriculture (Zoning Ordinance Chapter 19.12)***

The purpose of the Exclusive Agriculture (A) district is to designate areas suitable for agricultural uses and to prevent the encroachment of incompatible uses onto agricultural lands and the premature conversion of such lands to nonagricultural uses. Uses in the A district are limited primarily to agricultural uses and other activities compatible with agricultural uses. Resource extraction and energy development uses, including mining and mineral extraction pursuant to Chapter 19.100, is permitted within this zone classification subject to securing a conditional use permit in accordance with the standards and procedures set out in Chapter 19.104.

A-1 – Limited Agriculture (Zoning Ordinance Chapter 19.14)

The purpose of the Limited Agriculture (A-1) district is to designate areas suitable for a combination of estate-type residential development, agricultural uses and other compatible uses. Final map residential subdivisions are not allowed in the A-1 district. Uses allowed include the following and similar with limitations and with additional uses allowed by

conditional use permit: agricultural uses, breeding and raising animals, residential uses, commercial uses, utility and communication facilities, resource extraction and energy development uses, institutional and other uses.

M-3 – Heavy Industrial (Zoning Ordinance Chapter 19.40)

The purpose of the Heavy Industrial (M-3) district is to designate areas suitable for heavy manufacturing and industrial uses which have the greatest potential for producing undesirable or adverse by-products, including traffic, noise, odors, dust and vibrations. The M-3 district should be located in places substantially removed from residential areas. Uses allowed include the following and similar with limitations and with additional uses allowed by conditional use permit: residential uses, agricultural uses, recreation, entertainment and tourist facilities, commercial uses, industrial uses, transportation facilities, utility and communications facilities, resource extraction and energy development uses, waste facilities, institutional uses, and educational institutions and schools.

E(20) – Estate (20-acre Minimum Lot Size) (Zoning Ordinance Chapter 19.16)

The purpose of the Estate (E) district is to designate areas suitable for larger lot residential living environments. Uses are limited to those typical of and compatible with quiet residential neighborhoods. The minimum lot size shall be one-quarter ($\frac{1}{4}$) acre (ten thousand eight hundred ninety (10,890) square feet) unless the E district is combined with the Lot Size combining district (Chapter 19.54) where a larger minimum lot size is specified. Properties zoned E(20) are combined with the Lot Size combining district establishing a 20-acre minimum lot size.

NR(20) – Natural Resource (20-acre Minimum Lot Size) (Zoning Ordinance Chapter 19.46)

The purpose of the Natural Resource (NR) district is to designate lands that contain productive or potentially productive petroleum, mineral or timber resources and to prevent the encroachment of incompatible uses onto such lands. Uses in the NR district are limited to resource exploration, production and transportation, and to compatible activities. The minimum lot size shall be five (5) gross acres unless the NR district is combined with the Lot Size Combining district (Chapter 19.54) where a larger minimum lot size is specified. Properties zoned NR(20) are combined with the Lot Size combining district establishing a 20-acre minimum lot size.

FPP – Floodplain Primary (Zoning Ordinance Chapter 19.50)

The purpose of the Floodplain Primary (FPP) district is to protect the public health and safety and minimize property damage by designating areas that are subject to flooding with high velocities or depths and by establishing reasonable restrictions on land use in such areas. The FPP district shall be applied to those areas lying within the "floodway" as shown on the Flood Boundary Floodway Map (FBFM) or within the "designated floodway" on the state of California's Board of Reclamation's Kern River Designated Floodway Studies, or other maps where engineering studies have been made and adopted by the county board of supervisors. Uses in the FPP district are limited to those low intensity uses not involving buildings,

structures and other activities that might adversely affect or be adversely affected by flow of water in the floodway.

RS – Residential Suburban Combining District (Zoning Ordinance Chapter 19.60)

The purpose of the Residential Suburban (RS) combining district is to expand the number and type of permitted domestic agricultural uses within rural residential areas. The RS combining district may be combined with the Estate (E) where the minimum lot size is one-half (½) net acre (twenty-one thousand seven hundred eighty (21,780) square feet) or larger. The RS combining district may also be combined with the Platted Lands (PL) district, provided, that each lot contains a minimum of one-half (½) net acre. The uses allowed and regulations established by the RS district shall be in addition to regulations of the base district with which the RS district is combined. The keeping of animals permitted by the RS district is an accessory use and shall not be established until a primary use is established.

WE – Wind Energy Combining District (Zoning Ordinance Chapter 19.64)

It is the intent of the Wind Energy Combining District is to promote the use of proven wind-driven generators for energy recovery, and to promote safeguards ensuring the maintenance of the health, safety and welfare of the citizens of the county, and to promote the use of an alternative to fossil-fuel-generated electrical power in areas of the county which are identified to have suitable wind resources for production of commercial quantities of wind-generated electrical power. Permitted uses are wind-driven electrical generators, accessory administrative and maintenance structures, electrical facilities, and uses permitted by the base district.

FP – Floodplain Combining District (Zoning Ordinance Chapter 19.70)

The purpose of the Floodplain (FP) combining district is to protect the public health and safety and minimize property damage by designating areas that are potentially subject to flooding and by establishing reasonable restrictions on land use in such areas. The FP district shall be applied to those areas lying within Zone A on the Flood Insurance Rate Maps (FIRM) or those areas potentially subject to flooding as designated by the Kern County engineering and survey services department pending reclassification of such areas into the Floodplain Primary (FPP) district or the Floodplain Secondary (FPS) combining district.

4.11.3 Regulatory Setting

Local

Land use and planning decisions within and adjacent to the project site are guided and regulated by the *Kern County General Plan*, *Cameron Canyon Specific Plan*, and Kern County Zoning Ordinance. The *Kern County General Plan* contains goals, objectives, and policies and provides an overall foundation for establishing land use patterns. The *Cameron Canyon Specific Plan* is a detailed study of the Cameron Canyon area prepared for the purpose of guiding present and future land uses and development. The Kern County Zoning Ordinance contains regulations through which the *Kern County General Plan* provisions are implemented.

Applicable goals, policies, and implementation measures for each resource analyzed have been identified in their respective Regulatory Setting section in **Sections 4.1 through 4.18** of this EIR. The goals and policies listed in each section of **Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures***, that have the potential to conflict with the project are considered for consistency with the project in **Table 4.11-2, *Project Consistency with Applicable Plans, Policies, and Regulations***.

This section lists all applicable goals, objectives, policies, and implementation measures adopted for the purpose of avoiding or mitigating an environmental effect not previously identified in the above-referenced sections as they relate to land use planning and the project. The project's consistency with the *Kern County General Plan* and Kern County Zoning Ordinance is discussed under **Impact 4.11-1**.

Kern County General Plan

California Government Code 65300 requires Kern County to prepare and adopt a general plan. Its purpose is to give long-range guidance to Kern County officials making decisions affecting the growth and resources of unincorporated Kern County. The *Kern County General Plan* helps to ensure that day-to-day planning and land use decisions are in conformance with the long-range program designed to protect and further the public interest. It will be periodically reviewed and updated as the goals and requirements of the community evolve and change.

Each of the resource sections in **Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures***, of this EIR list goals and policies of the *Kern County General Plan* of particular potential relevance to that resource subject. An evaluation of the project's potential to conflict with policies of the *Kern County General Plan* is presented in **Table 4.11-2, *Project Consistency with Applicable Plans, Policies, and Regulations***, and discussed in **Impact 4.11-1**.

Cameron Canyon Specific Plan

The *Cameron Canyon Specific Plan* is a detailed study of the Cameron Canyon area prepared for the purpose of guiding present and future land uses and development. Each of the nine elements that are required as part of the *Kern County General Plan* have been addressed to the degree that they apply to Cameron Canyon. This plan has been designed to act as an integral component of the *Kern County General Plan* and is consistent with the adopted Countywide goals and policies. No development project shall be approved that is inconsistent with either this plan or the *Kern County General Plan* unless the respective plans have been amended by the Kern County Board of Supervisors to achieve consistency.

Kern County Ordinance

Title 19 – Zoning Ordinance

The Kern County Zoning Ordinance establishes the basic regulations under which land is developed. This includes allowable uses, building setback requirements, and development standards. Pursuant to State law, the zoning ordinance must be consistent with the *Kern County General Plan*. **Table 4.11-1, *Existing Uses, Zoning, and Land Use Designations***, lists the zoning designations for parcels within the project site. The applicable zoning districts are

summarized above in *Kern County Zoning Classifications*. In addition, the following zoning ordinance chapters are relevant for evaluation of the project.

Chapter 19.100 – Surface Mining Operations

Section 19.100.010 – Purpose and Application

The purpose of this chapter is to regulate surface mining operations consistent with the requirements of the California Surface Mining and Reclamation Act of 1975 (Public Resources Code Sections 2710 *et seq.* [SMARA]) and the State Policy for Surface Mining and Reclamation Practice (Title 14 of the California Administrative Code, sections 3500 *et seq.*). The requirements of this chapter are applicable to any surface mining operation undertaken in unincorporated Kern County, except for those operations specifically exempted by Sections 2714 or 2776 of the California Public Resources Code.

Chapter 19.104 – Conditional Use Permits

Section 19.104.010 – Purpose and Application

The purpose of this chapter is to establish procedures and general standards for the review and approval of Conditional Use Permits authorized by various sections of this title. Whenever a use is listed in any section of this title as a use subject to securing a Conditional Use Permit, it shall be approved only if it is consistent with the *Kern County General Plan* and meets all requirements of this title and subject to any conditions deemed appropriate by the decision-making authority.

Section 19.104.040 – Basis for Approval

The decision-making authority may approve or conditionally approve an application for a Conditional Use Permit if it finds all of the following:

- A. The proposed use is consistent with the goals and policies of the applicable General or Specific Plan.
- B. The proposed use is consistent with the purpose of the applicable district or districts.
- C. The proposed use is listed as a use subject to a Conditional Use Permit in the applicable zoning district or districts or a use determined to be similar to a listed conditional use in accordance with the procedures set out in Sections 19.08.030 through 19.08.080 of this title.
- D. The proposed use meets the minimum requirements of this title applicable to the use.
- E. The proposed use will not be materially detrimental to the health, safety, and welfare of the public or to property and residents in the vicinity.

4.11.4 Impacts and Mitigation Measures

Methodology

For the purposes of this analysis, relevant documents (particularly the *Kern County General Plan* and Kern County Zoning Ordinance) were consulted, and a site visit was performed. The project's consistency with plans and policies for each environmental topic area is summarized

below and is described in greater detail in the relevant environmental topic sections of **Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures***, of this EIR.

For this analysis of potential impacts associated with land use and planning, baseline conditions are the anticipated future project site condition at the completion of vested mining pursuant to the mine plan discussed in Chapter 3 and illustrated on **Figure 3-7, *Proposed Maximum Extent of Excavation***, in **Chapter 3**. Impacts of the project are assessed against the future mined condition baseline.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect related to land use and planning. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to land use and planning if it would:

- a. Physically divide an established community; or
- b. Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Project Impacts

Impact 4.11-1: The project would physically divide an established community.

The project site is not located between or adjacent to an established community and the project would not have the potential to divide an established community.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.11-2: The project would cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The project provides for reclamation of mined lands. The *Kern County General Plan* and Kern County Zoning Ordinance establish land use policies and regulations that are applicable to the proposed project. **Table 4.11-2, *Project Consistency with Applicable Plans, Policies, and Regulations***, summarizes the proposed project's general consistency with applicable goals and policies. Many of the issue areas evaluated in **Table 4.11-2, *Project Consistency with Applicable Plans, Policies, and Regulations***, are discussed in more detail in corresponding sections of this EIR.

Table 4.11-2 Project Consistency with Applicable Plans, Policies, and Regulations

Applicable Plan, Policy, or Regulation	Consistency Analysis
Chapter 1. Land Use, Open Space, and Conservation Element	
1.3 Physical and Environmental Constraints	
Goal 1. To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.	Consistent: The project site is in a remote area with limited adjacent land uses. Project activities are subject to Federal, State, and local safety regulations and would not pose a substantial risk to people or property.
Policy 1. Kern County will ensure that new developments will not be sited on land that is physically or environmentally constrained (Map Code 2.1 [Seismic Hazard], Map Code 2.2 [Landslide], Map Code 2.3 [Shallow Groundwater], Map Code 2.5 [Flood Hazard], Map Codes from 2.6 – 2.9, Map Code 2.10 [Nearby Waste Facility], and Map Code 2.11 [Burn Dump Hazard]) to support such development unless appropriate studies establish that such development will not result in unmitigated significant impact.	Consistent: Slope stability evaluations and drainage analyses prepared for the project determined that the project would not result in an unmitigated significant impact associated with seismic or flood hazards.
Policy 2. In order to minimize risk to Kern County residents and their property, new development will not be permitted in hazard areas in the absence of implementing ordinances and programs. These ordinances will establish conditions, criteria, and standards for the approval of development in hazard areas.	Consistent: The project would reclaim mine lands and does not involve construction of structures. Portions of the project site are within the 2.4 (Steep Slope) physical and environmental constraints overlay, requiring the project to adhere to standard grading practices to prevent soil instability and erosion. Portions of the project site are within the 2.5 (Flood Hazard) environmental constraints overlay per the <i>Kern County General Plan</i> . Portions of the project are within the 2.5 (Flood Hazard) and 2.6 (Erosion Hazard) physical constraints overlay per the <i>Cameron Canyon Specific Plan</i> .
Policy 3. Zoning and other land use controls will be used to regulate and, in some instances, to prohibit development in hazardous areas.	Consistent: The project would reclaim mine lands and does not involve construction of structures.
Policy 6. Regardless of percentage of slope, development on hillsides will be sited in the least obtrusive fashion, thereby minimizing the extent of topographic alteration required and reducing soil erosion while maintaining soil stability.	Consistent: The project would reclaim mine lands and does not involve construction of structures.
Policy 8. Encourage the preservation of the floodplain's flow conveyance capacity, especially in floodways, to be open space/passive recreation areas throughout the County.	Consistent: The drainage study prepared for the project determined that the project would not result in an unmitigated significant impact associated with stormwater runoff.
Policy 9. Construction of structures that impede water flow in a primary floodplain will be discouraged.	Consistent: The project would reclaim mine lands and would not involve construction of structures nor impede water flow in a primary floodplain.

Table 4.11-2 Project Consistency with Applicable Plans, Policies, and Regulations

Applicable Plan, Policy, or Regulation	Consistency Analysis
1.9 Resource	
Goal 1. To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations which will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources, or diminish the other amenities which exist in the County.	Consistent: The project would reclaim mine lands and would not involve construction of structures nor impair access to economically beneficial resources or amenities.
Goal 2. Protect areas of important mineral, petroleum, and agricultural resource potential for future use.	Consistent: The project would reclaim mine lands following mineral resources extraction. The mineral resources analysis conducted for this EIR determined that the project would not result in the loss of availability of important mineral resources nor result in significant impacts associated with agricultural resources.
Goal 3. Ensure the development of resource areas minimize effects on neighboring resource lands.	Consistent: The project would reclaim mine lands and would not involve construction of structures nor adversely affect resources on neighboring resource lands.
Policy 2. In areas with a resource designation on the General Plan map, only industrial activities which directly and obviously relate to the exploration, production, and transportation of the particular resource will be considered to be consistent with the General Plan.	Consistent: The project would reclaim mine lands following mineral resources extraction which is directly and obviously related to mineral resource extraction.
Policy 11. Minimize the alteration of natural drainage areas. Require development plans to include necessary mitigation to stabilize runoff and silt deposition through utilization of grading and flood protection ordinances.	Consistent: The project would reclaim areas disturbed by mining and would install stormwater basins and implement best management practices (BMPs) to mitigate potential stormwater and drainage impacts.
Policy 14. Emphasize conservation and development of identified mineral deposits.	Consistent: The project would reclaim mine lands following mineral resources extraction.
Policy 17. Lands classified as MRZ-2, as designated by the State of California, should be protected from encroachment of incompatible land uses.	Consistent: Portions of the project site are designated MRZ-2a and resources within these areas would be utilized through vested mining operations prior to project reclamation. The project would reclaim mined lands following mineral resources extraction and would not conflict with this policy.
1.10 General Provisions	
Policy 15. Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act (CEQA) documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.	Consistent: This EIR documents Kern County's environmental review of the project under CEQA and includes an evaluation of public services finding the project impact less than significant.

Table 4.11-2 Project Consistency with Applicable Plans, Policies, and Regulations

Applicable Plan, Policy, or Regulation	Consistency Analysis
<p>Policy 19. In considering discretionary projects for which an EIR must be prepared pursuant to the California Environmental Quality Act (CEQA), the appropriate decision-making body, as part of its deliberations, will ensure that:</p> <ul style="list-style-type: none"> a) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and b) The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the CEQA. 	<p>Consistent: This EIR documents Kern County's environmental review of the project under CEQA and includes an evaluation of air quality impacts. The project would result in less-than-significant air pollutant emissions after mitigation.</p>
<p>Policy 20. The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Eastern Kern Air Pollution Control District on ministerial permits.</p>	<p>Consistent: The project would be subject to the Eastern Kern Air Pollution Control District (EKAPCD) rules, including Rules 401 and 402 and Regulation IV, which serve to minimize fugitive dust emissions.</p>
<p>Policy 21. The County shall support air districts' efforts to reduce PM₁₀ and PM_{2.5} emissions.</p>	<p>Consistent: The project would be subject to the EKAPCD rules, including Rules 401 and 402 and Regulation IV which serve to minimize fugitive dust emissions.</p>
<p>Policy 25. The County will promote the preservation of cultural and historic resources that provide ties with the past and constitute a heritage value to residents and visitors.</p>	<p>Consistent: The analysis in this EIR considers potential effects on cultural resources, and the project would be required, through mitigation and through regulatory compliance, to minimize impacts and avoid significant effects to cultural resources.</p>
<p>Policy 27. Threatened or endangered plant and wildlife species should be protected in accordance with State and Federal laws.</p>	<p>Consistent: The analysis in this EIR considers potential effects on Threatened and Endangered species and the project would be required through mitigation and through regulatory compliance to minimize impacts on special-status species.</p>
<p>Policy 32. Riparian areas will be managed in accordance with United States Army Corps of Engineers, and the California Department of Fish and Game rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.</p>	<p>Consistent: The project would comply with applicable United States Army Corps of Engineers (USACE) and California Department of Fish and Wildlife (CDFW) regulations.</p>

Table 4.11-2 Project Consistency with Applicable Plans, Policies, and Regulations

Applicable Plan, Policy, or Regulation	Consistency Analysis
Policy 39. Encourage the development of the County's ground water supply to sustain and ensure water quality and quantity for existing users, planned growth, and maintenance of the natural environment.	Consistent: A Water Supply Assessment (Sespe Consulting 2025a) prepared for the project concluded that water demand for the project would be met utilizing existing groundwater wells and the use of groundwater for the project would not adversely affect other groundwater users or groundwater quality.
Policy 40. Encourage utilization of community water systems rather than the reliance on individual wells.	Consistent: Water Supply Assessment (Sespe Consulting 2025a) prepared for the project concluded that water demand for the project would be met utilizing existing groundwater wells and the use of groundwater for the project would not adversely affect other groundwater users or groundwater quality. Although the project does not propose to obtain water through a public water system, the project's reliance on offsite and onsite wells and verification of no significant impacts to other groundwater users is considered sufficient for a finding of consistency with this policy.
Policy 41. Review development proposals to ensure adequate water is available to accommodate projected growth.	Consistent: Water Supply Assessment (Sespe Consulting 2025a) prepared for the project concluded that water demand for the project would be met utilizing existing groundwater wells.
Policy 44. Discretionary projects shall analyze watershed impacts and mitigate for construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by the California Environmental Quality Act (CEQA), to prevent the degradation of the watershed to the extent practical.	Consistent: The Drainage Report (Sespe Consulting 2025g) prepared for the project determined that the project would not cause any adverse flooding or erosion effects on the Project site or surrounding properties. Kern County is recommending inclusion of mitigation measures requiring the project proponent/operator to submit a Stormwater Pollution Prevention Plan (SWPPP) and Spill Prevention, Control, and Countermeasure Plan (SPCC) to control potential water quality impacts.
Policy 47. Ensure that light and glare from discretionary new development projects are minimized in rural as well as urban areas.	Consistent: The project aesthetic impact analysis identifies the requirement for the project to use lighting that minimizes potential spill and night lighting impacts.
Policy 48. Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties.	Consistent: The project aesthetic impact analysis identifies the requirement for the project to use lighting that minimizes potential spill and night lighting impacts.

Table 4.11-2 Project Consistency with Applicable Plans, Policies, and Regulations

Applicable Plan, Policy, or Regulation	Consistency Analysis
Chapter 2 Circulation Element	
Goal 5. Maintain a minimum Level of Service (LOS) D for all roads throughout the County.	Consistent: As discussed in Section 4.15, Transportation and Traffic , of this EIR, the project would not cause or contribute to LOS D at any of the study area intersections or road segments.
Chapter 3 Noise Element	
Goal 1. Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.	Consistent: The Noise Analysis Memorandum (Sespe Consulting 2025j) prepared for the project determined that the project would not result in a significant noise impact; thus, the project would not conflict with this policy.
Policy 1. Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.	Consistent: The Noise Analysis Memorandum (Sespe Consulting 2025j) prepared for the project determined that the project would not result in a significant noise impact; thus, the project would not conflict with this policy.
Policy 4. Utilize good land use planning principles to reduce conflicts related to noise emissions.	Consistent: The Noise Analysis Memorandum (Sespe Consulting 2025j) prepared for the project determined that the project would not result in a significant noise impact; thus, the project would not conflict with this policy.
Policy 5. Prohibit new noise-sensitive land uses in noise-impacted areas unless effective mitigation measures are incorporated into the project design. Such mitigation shall be designed to reduce noise to the following levels: a. 65 dB-Ldn or less in outdoor activity areas. b. 45 dB-Ldn or less within living spaces or other noise sensitive interior spaces.	Consistent: The Noise Analysis Memorandum (Sespe Consulting 2025j) prepared for the project determined that the project would not result in a significant noise impact; thus, the project would not conflict with this policy.
Policy 7. Employ the best available methods of noise control.	Consistent: The Noise Analysis Memorandum (Sespe Consulting 2025j) prepared for the project determined that the project would not result in a significant noise impact; thus, the project would not conflict with this policy.
Chapter 4 Safety Element	
4.5 Landslides, Subsidence, Seiche, and Liquefaction	
Policy 1. Determine the liquefaction potential at sites in areas of shallow groundwater (Map Code 2.3) prior to discretionary development and determine specific mitigation to be incorporated into the foundation design, as necessary, to prevent or reduce damage from liquefaction in an earthquake.	Consistent: The analysis in this EIR determines that the project would have a less-than-significant impact associated with potential liquefaction.

Table 4.11-2 Project Consistency with Applicable Plans, Policies, and Regulations

Applicable Plan, Policy, or Regulation	Consistency Analysis
Policy 3. Reduce potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.	Consistent: The Slope Stability Assessment (Golder 2021a) prepared for the project determined that the project would not result in an unmitigated significant impact associated with slope failure or erosion.
4.6 Wildland and Urban Fire	
Policy 4. Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.	Consistent: Access to project reclamation areas would be via existing access from Oak Creek Road and access locations along Tehachapi Willow Springs Road that would be utilized in conjunction with vested mining operations prior to project reclamation.
Policy 6. All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.	Consistent: The project will comply with the adopted Fire Code and Fire Department requirements.

The project as proposed, would not conflict with the *Kern County General Plan* or the Kern County Zoning Ordinance. Reclamation would be accomplished on lands mined consistent with existing vested rights for mineral resources , and reclamation would be performed consistent with the SMARA and the project's proposed amended reclamation plan. Accordingly, any impacts would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

The geographic scope for cumulative land use impact considerations includes closely related past, present, and reasonably foreseeable future projects within the vicinity of the project site. **Section 3.7, *Cumulative Effects Overview***, of this EIR discusses cumulative projects near the project (**Table 3-15, *Cumulative Projects List***, in **Chapter 3, *Project Description***, lists specific projects considered in the cumulative impact analysis.)

Impact 4.11-3: The project would contribute to cumulative land use and planning impacts.

The project would not conflict with any land use plan, policies, or regulations, implementation of the project's reclamation plan and implementation of the mitigation measures in this EIR would ensure project compliance with applicable goals, policies, and regulations implemented by Kern County.

Limited planned or future projects are anticipated in the area that would create a potential for land use conflicts with the project. The analysis in this EIR considers existing land uses when determining potential impacts (e.g., visual, noise, air quality, etc.) and considers these impacts on a cumulative basis. Cumulatively, no impacts are found to be significant and unavoidable. No impacts identified in this EIR are anticipated to contribute to cumulative land use impacts. Therefore, the project's contribution to cumulative land use impacts is considered less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Cumulative impacts would remain less than significant.

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Section 4.12

Mineral Resources

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4.12.1 Introduction

This section of the Environmental Impact Report (EIR) describes the existing environment and regulatory setting in regard to mineral resources. It also describes the potential impacts on mineral resources that would result from implementation of the proposed project and any necessary mitigation measures that would reduce these impacts where applicable. The information in this section is based on the Kern County General Plan, California Department of Conservation (CDOC) documents and maps, and the 2000 California Geological Survey (CGS).

For this analysis of potential effects associated with mineral resources, baseline conditions are the anticipated future project site condition at the completion of vested mining pursuant to the mine plan discussed in Chapter 3 and illustrated on **Figure 3-7, Proposed Maximum Extent of Excavation**, in **Chapter 3**. Impacts of the project (i.e., reclamation under the amended reclamation plan) are assessed against the future mined condition baseline.

4.12.2 Environmental Setting

The Environmental Setting discusses the existing conditions related to mineral resources within the project area, which includes the project site.

Regional Setting

Mineral and petroleum resources are basic to Kern County's economy. Kern County produces more oil than any other California county. Borax, cement production, and construction aggregates also constitute major economic mineral resources within the County. As new recovery technologies come into use, petroleum extraction is expected to continue in economic importance. An increasing demand for borax, cement, and construction aggregates is also expected to continue (Kern County 2009). In 1999, the State Geologist analyzed 2,971 square miles of land in Kern County to determine the location of mineral resource zones throughout the County. The mineral resource zone (MRZ) categories are defined as follows:

- MRZ-1:** Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2a:** Areas underlain by mineral deposits where geologic data indicate that significant measured or indicated resources are present. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves. Land included in MRZ-2a is of prime importance because it contains known economic mineral deposits.

MRZ-2b: Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain inferred mineral resources as determined by their lateral extension from proven deposits or their similarity to proven deposits. Further exploration could result in upgrading areas classified MRZ-2b to MRZ-2a.

MRZ-3a: Areas containing known mineral occurrences of undetermined mineral resource significance. Further exploration could result in reclassification of all or part of these areas into MRZ-2a or MRZ-2b categories.

MRZ-3b: Areas containing inferred mineral occurrences of undetermined mineral resource significance. Further exploration could result in the reclassification of all or part of these areas into the MRZ-2a or MRZ-2b categories.

MRZ-4: Areas containing no known mineral occurrence.

Table 4.12-1, *Classified Mineral Resources within Kern County*, demonstrates the classified mineral resources within Kern County that are part of the MRZ-2 group and, therefore, have a demonstrated mineral significance (as opposed to the MRZ-3 group, which has an undetermined mineral significance).

Table 4.12-1 Classified Mineral Resources within Kern County

Mineral Resource	MRZ Classification	Number of Areas	Total Acreage
Borates	MRZ-2a and 2b	2	2,564
Limestone	MRZ-2a	4	2,008
Limestone	MRZ-2b	2	157
Silica	MRZ-2a	1	119
Pozzolan (essential cement additive)	MRZ-2b	1	72
Gold	MRZ-2a	3	849
Gold	MRZ-2b	8	6,619
Dimension Stone	MRZ-2a	2	527

Source: Koehler 1999a.

Site Characteristics

General geologic conditions in the project area are described in **Section 4.7, *Geology and Soils***, of this EIR. Portions of the project site are designated MRZ-2a (Koehler 1999b). Land uses in the vicinity of the project site include dispersed rural residences and renewable energy facilities. Clay, silver, and gold mining have been conducted at various locations in the area since the 1890s with gold and silver mining continuing at the Soledad Mountain Golden Queen Mine located approximately 6.5 miles southeast of the project site. Other active and inactive mine sites are also in the vicinity. Within the project site boundaries are the Mojave Cement Plant and existing mining operations, owned and operated by the project proponent. There are no known oil or gas wells located within the project boundary.

4.12.3 Regulatory Setting

State

California Department of Conservation Geologic Energy Management Division

CalGEM is a State agency responsible for regulating the drilling, operation, and permanent closure of oil, gas, and geothermal wells. CalGEM also regulates certain pipelines and facilities associated with production and injection, as well as wells and other facilities using science and sound engineering practices to protect the public and the environment.

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act (SMARA) of 1975 (Public Resources Code [PRC] Sections 2710–2796) regulates surface mining operations to assure that adverse environmental impacts are minimized, and mined lands are reclaimed to a usable condition. SMARA encourages the production, conservation, and protection of the State’s mineral resources and requires the State Geologist to classify land into MRZs according to its known or inferred mineral potential. The primary goal of mineral land classification is to ensure that the mineral potential of land is recognized by local government decision makers and considered before land-use decisions are made that could preclude mining (Koehler 1999a).

Local

Kern County General Plan

The policies, goals, and implementation measures in the Kern County General Plan for mineral resources applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development such as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

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

1.9 Resource

Goals

- **Goal 1.** To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations that will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources or diminish the other amenities that exist in the County.
- **Goal 2.** To protect areas of important mineral, petroleum, and agricultural resource potential for future use.
- **Goal 3.** To ensure that the development of resource areas minimizes effects on neighboring resource lands.

Policies

- **Policy 2.** In areas with a resource designation on the General Plan map, only industrial activities which directly and obviously relate to the exploration, production, and transportation of the particular resource will be considered to be consistent with this General Plan.
- **Policy 14.** Emphasize conservation and development of identified mineral deposits.
- **Policy 15.** Agriculture and other resource uses will be considered a consistent use in areas designated for Mineral and Petroleum Resource uses on the General Plan.
- **Policy 25.** Discourage incompatible land use adjacent to Map Code 8.4 (Mineral and Petroleum) areas.

Implementation Measures

- **Implementation Measure H.** Use the California Geological Survey's latest maps to locate mineral deposits until the regional and Statewide importance mineral deposits map has been completed, as required by the Surface Mining and Reclamation Act.
- **Implementation Measure K.** Protect oilfields and mineral extraction areas through the use of appropriate implementing zone districts: A (Exclusive Agriculture), DI (Drilling Island), NR (Natural Resource), or PE (Petroleum Extraction).

Cameron Canyon Specific Plan

The policies, goals, and implementation standards in the *Cameron Canyon Specific Plan* for mineral resources applicable to the project are provided below. The *Cameron Canyon Specific Plan* contains additional policies, goals, and implementation standards that are more general in nature and are not specific to development such as the project. Therefore, they are not listed below, but all policies, goals, and implementation standards in the *Cameron Canyon Specific Plan* are incorporated by reference.

Section I. Physical Constraints*Policies*

- **Policy 7.** Development on highly erosive soils shall be limited and measures incorporated in order to reduce erosion potential. The expertise of the Tehachapi Resource Conservation District shall be employed whenever possible to aid in the of future development of all kinds.

Implementation Measures

- **Implementation Standard 6.** The Tehachapi Resource Conservation District shall be contacted for assistance in developing a soil management plan prior to any development involving grading or vegetation removal. The recommendation of the district shall be rigidly followed.

Section VI. Resource

Goals

- **Goal 4.** To ensure that any earthwork or grading is adequately designed for drainage and erosion control and site rehabilitation.

Implementation Measure 2: Prior to the issuance of grading or building permits for development, the developer shall submit a soils capability report and a soil management plan. The soils report shall be prepared by a soils engineer; the soil management plan shall be prepared in cooperation with the Tehachapi Resource Conservation District and shall address means of avoiding soil erosion. Permits shall not be given final clearance until all recommendations contained within the soils report and the management plan have been implemented.

4.12.4 Impacts and Mitigation Measures

Methodology

CDOC publications, the *Kern County General Plan* map, and aerial photos were evaluated to identify potential conflicts of the project's presence and operations with mineral resource extraction. Using these resources and professional judgment, mineral resources impacts were analyzed according to CEQA significance criteria described below.

For this analysis of potential effects associated with mineral resources, baseline conditions are the anticipated future project site condition at the completion of vested mining pursuant to the mine plan discussed in Chapter 3 and illustrated on **Figure 3-7, Proposed Maximum Extent of Excavation**, in **Chapter 3**. Impacts of the project are assessed against the future mined condition baseline.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect related to mineral resources. A project could have a significant adverse effect on mineral resources if it would:

- a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
- b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Project Impacts

Impact 4.12-1: The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

Prior to implementation of the project, vested mining operations would result in the production of limestone and construction materials resources within the project site, decreasing the amount of a known mineral resource of value to the region while also resulting in the productive use of the mineral resource. While reclamation of the mined site would not produce additional mineral resources, reclamation would not result in the loss of availability of a known mineral resource. Further, the proposed end use of open space would not preclude future additional mineral extraction on the site.

Because the project would not preclude the future extraction of additional mineral resources, and would not result in the loss of availability of any known Statewide or regionally important mineral resources remaining within the site following the completion of vested mining, this evaluation concludes that the project would have a less-than-significant impact associated with the loss of availability of a known mineral resource of value to the region or residents of the state.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.12-2: The project would result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Prior to implementation of the project, vested mining operations would result in the production of limestone and construction materials resources within the project site, decreasing the amount of a known mineral resource of value to the region while also resulting in the productive use of the mineral resource. While reclamation of the mined site would not produce additional mineral resources, reclamation would not result in the loss of availability of a known mineral resource. Further, the proposed end use of open space would not preclude future additional mineral extraction on the site.

Because the project would not preclude the future extraction of additional mineral resources, and would not result in the loss of availability of any locally important mineral resources remaining within the site following the completion of vested mining, this evaluation concludes that the project would have a less-than-significant impact associated with the loss of availability of a locally important mineral resource.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures**Cumulative Setting**

Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. **Section 3.7, *Cumulative Effects Overview***, of this EIR discusses cumulative projects near the project (**Table 3-15, *Cumulative Projects List***, in **Chapter 3, *Project Description***, lists specific projects considered in the cumulative impact analysis). However, the geographic scope for cumulative impacts to mineral resources includes all of Kern County. This geographic scope of analysis is appropriate because the loss of availability of mineral resources anywhere in the County would combine with mineral resource impacts of the project to result in a cumulative impact associated with the Countywide loss of an important mineral resource.

Impact 4.12-3: The project would contribute to cumulative mineral resources impacts.

Prior to implementation of the project, vested mining operations would result in the production of limestone and construction materials resources within the project site, decreasing the amount of a known mineral resource of value to the region while also resulting in the productive use of the mineral resource. The project's proposed end use of open space would not preclude future onsite mineral resource development, nor would the project result in the loss of a locally important mineral resource recovery site. The reclamation of the site would not have the potential to result in a considerable contribution to a cumulative impact when considered in combination with impacts from past, present, or reasonably foreseeable projects that could result in the loss of an important mineral resource. Therefore, the proposed project would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site and would not contribute to any cumulative impacts to mineral resources.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Cumulative impacts would be less than significant.

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Section 4.13

Noise

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4.13.1 Introduction

This section of the Environmental Impact Report (EIR) addresses the potential noise and vibration impacts associated with the project. It describes the existing noise conditions on the project site, the regulatory setting, the impacts of the project, and feasible mitigation measures to reduce impacts. The information in this section incorporates information from the *Noise Analysis Memorandum – CalPortland Company, Proposed Mojave Mine Reclamation Plan Amendment* (Sespe Consulting 2025j), included as Appendix J of this EIR.

For this analysis of potential impacts associated with noise and vibration, baseline conditions are existing noise and vibration conditions within the project area and impacts of the project (reclamation) are assessed against the existing conditions baseline.

Terminology

The following is a brief discussion of common noise terminology and descriptors used in this section.

- **Noise:** Loud, unpleasant, unexpected, or otherwise undesirable sound that is typically associated with human activity and interferes with or disrupts normal activities. The effects of noise on people can be grouped into four general categories:
 - Subjective effects (dissatisfaction, annoyance);
 - Interference effects (communication and sleep interference, learning);
 - Physiological effects (startle response); and
 - Physical effects (hearing loss).
- **Sound:** A vibratory disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, can be detected by a receiving mechanism such as human ears or a microphone.
- **Ambient Noise Level:** The composite noise from all sources resulting in the normal, existing level of environmental noise at a given location. The ambient level is typically defined by the equivalent sound pressure level (L_{eq}).
- **Background Noise Level:** The underlying ever-present lower-level noise that remains in the absence of intrusive or intermittent sounds. Distant sources, such as traffic, typically make up the background. The background level is generally defined by the L_{90} percentile noise level, which is defined as the level exceeded for 90% of the time.
- **Intrusive:** Noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, tonal content, the prevailing ambient noise level, and

the sensitivity of the receiver. The intrusive level is generally defined by the L10 percentile noise level, which is defined as the level exceeded for 10% of the time.

- **Decibel (dB):** A measure of sound or vibration amplitude on a logarithmic scale that indicates the squared ratio of sound pressure or vibration velocity root-mean-squared (RMS) amplitude to a reference sound pressure or vibration amplitude. For sound, the reference pressure is 20 micropascals.
- **A-Weighted Decibel (dBA):** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Sound Pressure Level (L_{eq}):** The equivalent steady-state sound or vibration level that would contain the same acoustical or vibration energy in a stated period of time.
- **Day-Night Average Sound Level (L_{dn}):** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m. A noise source that has an L_{eq} that is constant throughout a 24-hour period would have an L_{dn} that is 6 dB higher than the L_{eq} . For example, a noise source that operates at 60 L_{eq} and operates 24 hours a day would have an L_{dn} of 66 dB.
- **Hertz (Hz):** A unit of frequency. The number of times per second that the sine wave of sound repeats itself, or that the sine wave of a vibrating object repeats itself.
- **Community Noise Equivalent Level (CNEL):** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring between 7:00 p.m. and 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring between 10:00 p.m. and 7:00 a.m.

L_{dn} and CNEL values rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent and are treated as such in this assessment. In general, human sound perception is such that a change in sound level of 3 dB is just noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level (California Department of Transportation [Caltrans] 2009).

Noise is a by-product of human activities. Noise is generally defined as unwanted sound. The range of sound pressure perceived as sound is extremely large. The decibel is the preferred unit for measuring sound, since it accounts for these variations using a relative scale adjusted to the range of hearing (referred to as the A-weighted decibel or dBA). The A-weighted decibel is a method of sound measurement that assigns weighted values to selected frequency bands in an attempt to reflect how the human ear responds to sound. The range of human hearing is from 0 dBA (the threshold of hearing) to about 140 dBA (the threshold for pain). Examples of noise and their A-weighted decibel levels are shown in **Table 4.13-1, Typical Noise Levels**.

Table 4.13-1 Typical Noise Levels

Noise Level (dBA)	Outdoor Activity	Indoor Activity
90+	Gas lawn mower at 3 feet, jet flyover at 1,000 feet	Rock band
80–90	Diesel truck at 50 feet	Loud television at 3 feet, food blender at 3 feet
70–80	Gas lawn mower at 100 feet, noisy urban area	Garbage disposal at 3 feet, vacuum cleaner at 10 feet
60–70	Commercial area, heavy traffic at 300 feet	Normal speech at 3 feet
40–60	Quiet urban daytime, traffic at 300 feet	Large business office, dishwasher next room
20–40	Quiet rural, suburban nighttime	Concert hall (background), library, bedroom at night
10–20		Broadcast/recording studio

Source: Caltrans 2009.

To calculate the noise level at a given distance from a noise source, noise levels can be modeled using the Inverse Square Law of Noise Propagation (Caltrans 2009), which states that noise decreases by approximately 6 dBA with every doubling of the distance from the source. **Table 4.13-2, *Noise Level Changes with Distance from Source***, indicates how noise levels would decrease with distance from the source of noise, using the Inverse Square Law of Noise Propagation.

Table 4.13-2 Noise Level Changes with Distance from Source

Distance from Source of Noise (feet)	Noise Level (dB)
50	91
100	85
500	71
1,000	65
2,500	57
5,000	51

Source: Caltrans 2009.

Vibration

Vibration is defined as the mechanical motion of earth or ground, building, or other type of structure induced by the operation of any mechanical device or equipment located upon or affixed thereto. Vibration generally results in an oscillatory motion in terms of the displacement, velocity, or acceleration of the ground or structure(s) that causes a normal person

to be aware of the vibration by means such as, but not limited to, sensation by touch or visual observation of moving objects.

The effects of ground-borne vibration include movements of building floors, rattling of windows, and shaking of items on shelves or hangings on the walls. In extreme cases, vibration can cause damage to buildings. The noise radiated from the motion of the room surfaces is called ground-borne noise. Typical levels of ground-borne vibration are listed in **Table 4.13-3, *Typical Levels of Ground-Borne Vibration***. The vibration motion normally does not provoke the same adverse human reactions as the noise unless there is an effect associated with the shaking of the building. In addition, the vibration noise can only occur inside buildings. Similar to the propagation of noise, vibration propagated from the source to the receptor depends on the receiving building (i.e., the weight of the building), soil conditions, layering of the soils, the depth of groundwater table, etc.

Table 4.13-3 Typical Levels of Ground-Borne Vibration

Response	Velocity Level ¹	Typical Sources (at 50 Feet)
Minor cosmetic damage of fragile buildings	100	Blasting from construction projects
Difficulty with tasks such as reading a video display terminal (VDT) screen	90	Bulldozers and other heavy-tracked construction equipment
Residential annoyance, infrequent events	80	Rapid transit, upper range
Residential annoyance, frequent events	70	High speed rail, typical
Approximate threshold for human perception	60	Bus or truck, typical
None	50	Typical background vibration

Source: Caltrans 2009.

Notes:

1. RMS vibration velocity level in vibration decibels (VdB) relative to 10⁻⁶ inches/second.

4.13.2 Environmental Setting

The project is located approximately 9.0 miles southeast of the City of Tehachapi and 8.5 miles west of the town of Mojave, in unincorporated Kern County, California. The environment surrounding the project site is primarily comprised of barren and undeveloped desert land, with few structures or built-out land uses. Oak Creek Road runs east-west along the site's northern boundary, and Tehachapi Willow Springs Road bisects the project site and also runs north-south along a portion of the project site's western boundary. The surrounding land uses consist of open space, renewable energy generation (i.e., wind farms), and other mining and industrial uses. Other than large wind turbines and associated infrastructure, there are few existing structures or developed land uses in the areas immediately adjacent to the project site.

Ambient Noise Environment

The existing ambient noise environment is consistent with that of typical semi-rural areas of Kern County. Existing noise sources near the project site receptors include equipment noise

from the project proponent's existing vested operations, traffic noise from nearby roadways, noise from nearby wind turbines, and natural sounds (wind, plants rustling, birds/insects, etc.). Periods of extremely high winds are also typical of the region, and were present during portions of the noise monitoring period performed in support of this assessment (Sespe Consulting 2025j).

Per the *Kern County General Plan* (Kern County 2009), noise sensitive receptors are defined as “residential areas, schools, convalescent and acute care hospitals, parks and recreation areas, and churches.” For the noise and vibration analysis, the nearest relevant sensitive noise receptor in each direction from the project site was selected, as baseline measurements and estimate project noise levels determined at these closest receptors conservatively account for other potentially affected receptors located farther from the project noise sources (Sespe Consulting 2025j). The locations of the baseline noise measurement locations and the corresponding project site receptors are shown on **Figure 4.13-1, Noise Monitoring Locations and Sensitive Receptors Map**. Noise and vibration impacts were assessed at seven (7) sensitive receptors in the vicinity of the project site. These sensitive receptors, their distance from the nearest project reclamation areas, and a summary of each receptor location are provided in **Table 4.13-4, Analyzed Project Receptors**.

Table 4.13-4 Analyzed Project Receptors

Receptor	Distance to Nearest Reclamation Area (feet)	Location
1	5,400	Residence located south of the project site, at the end of a dirt road to the west of Tehachapi Willow Springs Road.
2	5,500	Residence located northwest of the project site, adjacent to Tehachapi Willow Springs Road.
3	6,450	Residence located north of the project site, adjacent to Cameron Canyon Road.
4	17,650	Residence located northeast of the project site, adjacent to Rolling Hills Road.
5	32,000	Group of residences east of the project site, adjacent to Rutan Road.
6	31,700	Residence located east of the project site, near the corner of Balboa Avenue and W. 57th Street.
7	7,400	Residence/commercial facility located south of the project site, west of Tehachapi Willow Springs Road.

Source: Sespe Consulting 2025j.

To quantify the existing ambient (i.e., baseline) noise environment experienced by receptors closest to the project site, noise measurements were collected at four (4) locations surrounding the project site on May 19th and 20th, 2021 (Sespe Consulting 2025j). Noise measurement site locations are shown on **Figure 4.13-1, Noise Monitoring Locations and Sensitive Receptors Map**. The results of the measurements are summarized in **Table 4.13-5, Ambient Noise Monitoring Results**.

Table 4.13-5 Ambient Noise Modeling Results

Monitoring Location	Hourly Average Noise (Leq)	Day-Night Average (Ldn)
1	61.2	67.0
2	60.3	72.1
3	57.9	71.5
4	57.7	65.8

Source: Sespe Consulting 2025j.

Ambient Vibration Environment

The existing ambient vibration environment in the immediate project vicinity is extremely low, consistent with that expected in typical rural environments with no appreciable sources of local vibration. During field visits performed for the noise and vibration analysis (Sespe Consulting 2025j), typical vested mining operations (e.g., drilling, blasting, material recovery, movement, and processing) were actively occurring at the project site. Blasting agents are not proposed to be utilized for reclamation activities. Drilling and blasting would continue to be conducted in conjunction with mining, however no drilling and/or blasting associated with reclamation activities would be conducted. These activities generate some vibration; however, Sespe Consulting staff did not detect any appreciable groundborne vibrations resulting from these operations; thus, ambient vibration levels around the project perimeter are considered to be less than the threshold of perception (Sespe Consulting 2025j).

4.13.3 Regulatory Setting

State

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each County and City adopt a General Plan that includes a Noise Element, which is to be prepared according to guidelines adopted by the Governor’s Office of Planning and Research. The purpose of the general plan noise element is to “limit the exposure of the community to excessive noise levels.”

The California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

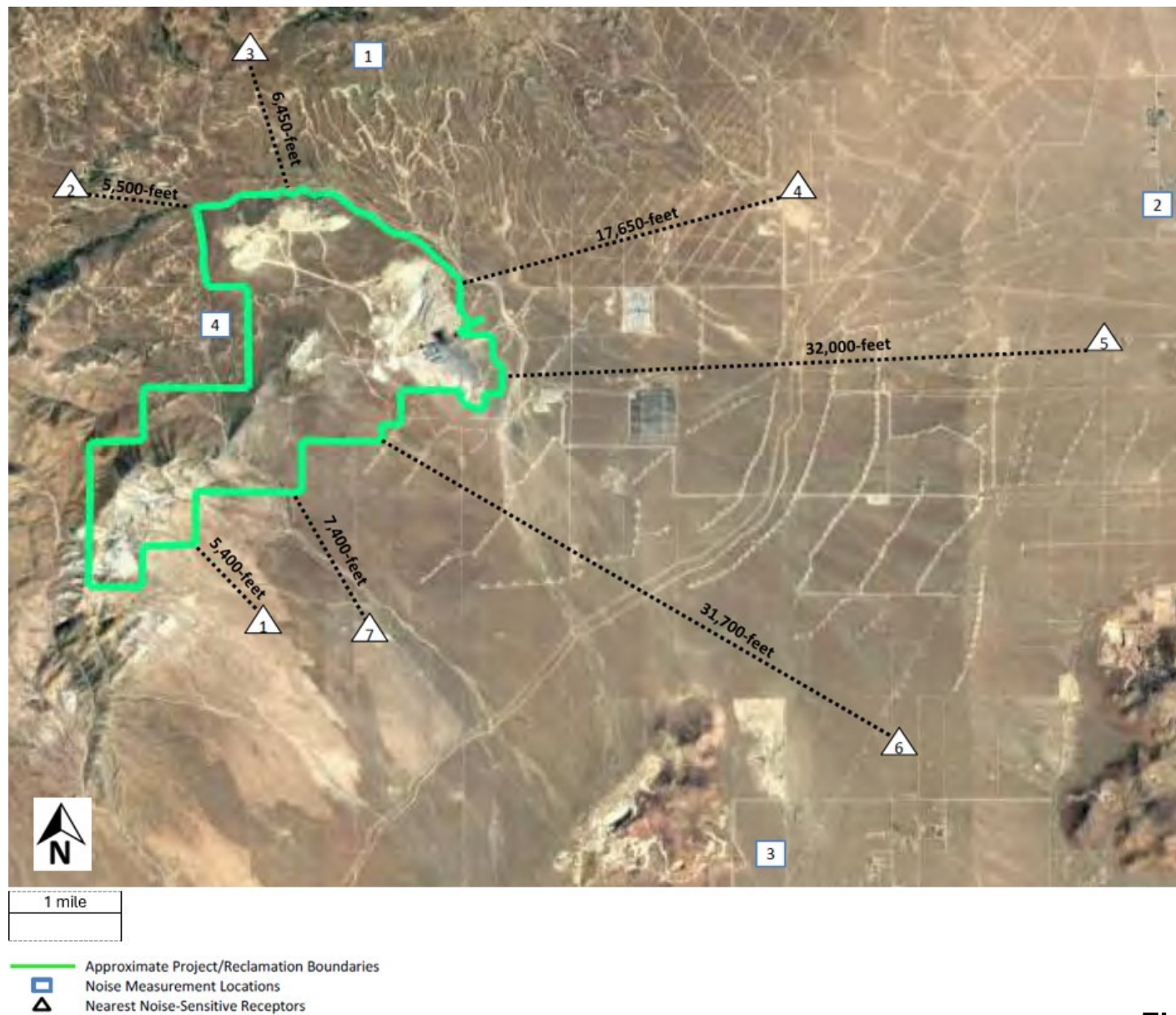


Figure 4.13-1
Noise Monitoring Locations and Sensitive Receptors Map

Local

Kern County General Plan

The *Kern County General Plan* Noise Element identifies goals, policies, and implementation measures that are used to guide development with regard to noise. The Noise Element establishes reasonable standards for maximum desired noise level in Kern County and provides an implementation program for addressing noise within the County. The *Kern County General Plan Noise Element* identifies residential areas, schools, convalescence and acute care hospitals, parks and recreational areas, and churches as noise-sensitive land uses. In noise-sensitive areas, exterior noise levels generated by new projects are to be mitigated to 65 dB L_{dn} or less in outdoor activity areas and 45 dB L_{dn} or less within interior living spaces or other noise-sensitive interior spaces.

The Noise Element specifies the maximum exterior and interior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies noise polices designed to protect, create, and maintain an environment free from noise that may jeopardize the health or welfare of sensitive receptors, or degrade quality of life. To ensure that residents of Kern County are protected from excessive noise, the Noise Element identifies a policy to review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.

While Kern County specifies maximum exterior and interior noise levels for new developments impacted by transportation noise sources, such as arterial roads, freeways, airports and railroads, it does not identify any specific exterior noise criteria for mineral and petroleum land use, such as the proposed project. To limit the noise exposure to noise-sensitive land uses, Kern County has defined an exterior noise standard of 65 dBA CNEL and an interior noise standard of 45 dBA CNEL.

The following *Kern County General Plan* goals, policies, and implementation measures have been identified as having potential applicability to the project:

Chapter 3. Noise Element

3.2 Noise Sensitive Areas

Goals

- **Goal 1.** Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.

Policies

- **Policy 1.** Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.
- **Policy 2.** Require noise level criteria applied to all categories of land uses to be consistent with the recommendations of the California Division of Occupational Safety and Health (DOSH).

- **Policy 3.** Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise.
- **Policy 4.** Utilize good land use planning principles to reduce conflicts related to noise emissions.
- **Policy 5.** Prohibit new noise-sensitive land uses in noise-impacted areas unless effective mitigation measures are incorporated into the project design. Such mitigation shall be designed to reduce noise to the following levels:
 - a. 65 dB L_{dn} or less in outdoor activity areas.
 - b. 45 dB L_{dn} or less within living spaces or other noise sensitive interior spaces.
- **Policy 7.** Employ the best available methods of noise control.

Implementation Measures

- **Implementation Measure A.** Utilize zoning regulations to assist in achieving noise-compatible land use patterns.
- **Implementation Measure C.** Review discretionary development plans, programs and proposals, including those initiated by both the public and private sectors, to ascertain and ensure their conformance to the policies outlined in this element.
- **Implementation Measure F.** Require proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise sensitive land uses to exterior noise levels in excess of 65 dB L_{dn} and interior noise levels in excess of 45 dB L_{dn} .
- **Implementation Measure G.** At the time of any discretionary approval, such as a request for a General Plan Amendment, zone change or subdivision, the developer may be required to submit an acoustical report indicating the means by which the developer proposes to comply with the noise standards. The acoustical report shall:
 - a. Be the responsibility of the applicant.
 - b. Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.
 - c. Be subject to the review and approval of the Kern County Planning Department and the Environmental Health Services Department. All recommendations therein shall be complied with prior to final approval of the project.
- **Implementation Measure I.** Noise analyses shall include recommended mitigation, if required, and shall:
 - a. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
 - b. Include estimated noise levels, in terms of CNEL, for existing and projected future (10 – 20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.

- c. Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.
 - d. Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.
- **Implementation Measure J.** Develop implementation procedures to ensure that requirements imposed pursuant to the findings of an acoustical analysis are conducted as part of the project permitting process.

Cameron Canyon Specific Plan

The *Cameron Canyon Specific Plan* is a detailed study of the Cameron Canyon area prepared for the purpose of guiding present and future land uses and development. Each of the nine elements that are required as part of the *Kern County General Plan* have been addressed to the degree that they apply to Cameron Canyon. This plan has been designed to act as an integral component of the *Kern County General Plan* and is consistent with the adopted Countywide goals and policies. No development project shall be approved that is inconsistent with either this plan or the *Kern County General Plan* unless the respective plans have been amended by the Kern County Board of Supervisors to achieve consistency.

Section IX. Noise Element

3.2 Noise Sensitive Areas

Goals

Goal 1. To minimize the effect of noise generating activities on noise sensitive land uses.

Goal 2. To maintain the rural atmosphere of Cameron Canyon.

Policies

Policy 1. The policies of the Kern County Noise Element are hereby adopted by reference.

Implementation Measures

Implementation Measure 1. The implementation measures of the Kern County Noise Element are hereby adopted by reference.

Kern County Ordinance

Operational (stationary source) noise impacts are regulated by the Kern County Code of Ordinances, Title 8 - Health and Safety, Chapter 8.36 - Noise Control. Chapter 8.36 focuses on loud and raucous noise, public address systems, broadcasting, and construction noise.

Title 8 – Health and Safety

Chapter 8.36 – Noise Control

Operational Noise Standards

While Chapter 8.36 of the Kern County Code of Ordinances describes prohibited sounds, Kern County has not established specific exterior noise limits to control the stationary source noise

impacts associated with mining operations. Instead, Kern County has adopted implementation policies within the Noise Element to require commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise-sensitive land use to exterior noise levels in excess of 65 dBA CNEL and interior noise levels in excess of 45 dBA CNEL.

Vibration

Kern County does not include thresholds of significance for vibration levels. Per the Federal Transit Administration (FTA), engineered concrete and masonry buildings (no plaster) susceptible to vibration damage begin to experience structural damage at vibration levels of 0.3 inches per second Peak Particle Velocity (PPV) (FTA 2006, Table 12-3).

4.13.4 Impacts and Mitigation Measures

Methodology

The project is a reclamation plan amendment for reclamation of the project proponent's vested facility. Because the project proponent's existing mining and processing operations are vested, noise and vibration impacts associated with these existing and ongoing operations are not considered within this analysis. Thus, this evaluation only considers potential noise and vibration impacts associated with onsite reclamation activities.

Noise and vibration generated by the project would be associated with final reclamation activities performed following the completion of vested mining operations. The project would not increase the number of employees compared to baseline conditions and therefore worker commute trips would not increase under the project. Specifically, employees and vehicle trips to and from the site during reclamation would be far less than the existing vehicle trips associated with the current onsite vested mining and processing operations, and offsite transportation noise associated with these existing vehicles were captured within the baseline noise measurements collected in 2021 (Sespe Consulting 2025j). Because vehicle trips would not change or increase beyond the baseline conditions, transportation noise associated with the project was sufficiently captured in the ambient/baseline noise levels, which have then been added to the project equipment noise to conservatively estimate project noise levels at each receptor. Additionally, the proposed reclamation activities would utilize the existing mobile equipment located onsite, and mobile reclamation equipment would not need to operate on public roadways. For these reasons, analysis of offsite transportation noise and vibration analysis is not warranted for the project, and therefore the evaluation here is of potential noise and vibration impacts associated with onsite reclamation equipment use.

To estimate the noise generated by the project noise sources (i.e., onsite reclamation equipment), average (L_{eq}) and maximum sound pressure level (L_{max}) reference data was gathered from the Federal Highway Administration's (FHWA) Roadway Construction Noise Model User Guide (FHWA 2006) using default values for usage sound pressure levels for various equipment types and conservatively assuming that mobile equipment used during reclamation would operate 24 hours per day, simultaneously, and at-grade at onsite locations nearest each modeled sensitive receptor (Sespe Consulting 2025j).

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect related to noise. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to noise if it would result in:

- a. Generation of a substantial temporary or permanent increase in the ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies;
- b. Generation of, excessive ground borne vibration or ground borne noise levels;
- c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or
- d. For a project located within the Kern County Airport Land Use Compatibility Plan, would the project expose people residing or working in the project area to excessive noise levels.

Project Impacts

Impact 4.13-1: The project would generate a substantial temporary or permanent increase in the ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies.

Reclamation of the project site would require the operation of mobile equipment and employee vehicles throughout the project reclamation areas to facilitate revegetation and reclamation in accordance with the project reclamation plan. As part of reclamation, off-road mobile equipment (e.g., loaders, dozers, scrapers, etc.) would be used to re-contour/regrade slopes, remove equipment/structures, and revegetate the site via hydroseeding. Employee work trucks and water trucks would also travel throughout the site to transport employees and supplies, and to apply water for dust control purposes. Although reclamation of the project site is estimated to occur approximately 12 hours per day, generally during daylight periods, the noise impact analysis assumes reclamation activities could occur continuously up to 24 hours per day. Additionally, the analysis assumes that mobile equipment used for reclamation would operate simultaneously, at-grade in the onsite locations in closest proximity to each evaluated receptor (Sespe Consulting 2025j).

Table 4.13-6, *Reclamation-Equipment List/Reference Noise Data*, lists the various primary equipment anticipated to be used for the project, reference maximum (L_{max}) and average (L_{eq}) noise levels for each equipment type.

Table 4.13-6 Reclamation-Equipment List/Reference Noise Data

Equipment Type	Usage (%)	L _{max} at 50-feet (dBA)	L _{eq} at 50-feet (dBA)
Water Truck (2)	40	84	80
Scraper	40	85	81
Dozer (2)	40	85	81
Backhoe	40	80	76
Excavator	40	85	81
Grader	40	85	81
Front End Loader	40	80	76
Combined Equipment Noise Level at 50-feet (dBA L_{eq})			89.6

Source: Sespe Consulting 2025j.

Table 4.13-7, Project Noise Level Increases and Significance Determination, shows the predicted increase in noise level experienced at each receptor during project reclamation activities.

Table 4.13-7 Project Noise Level Increases and Significance Determination

Receptor	Ambient Noise Level (L _{dn})	Total Project Noise Level (L _{dn})	Change (dBA) ¹	FICON Significance Threshold	Significant?
1	65.8	66.2	0.373	+1.5	No
2	65.8	66.2	0.360	+1.5	No
3	67.0	67.2	0.202	+1.5	No
4	67.0	67.0	0.028	+1.5	No
5	72.1	72.1	0.003	+1.5	No
6	71.5	71.5	0.003	+1.5	No
7	65.8	66.0	0.203	+1.5	No

Source: Sespe Consulting 2025j.

Notes:

1. Values shown represent the dBA increase in noise experienced at each receptor resulting from project noise sources (i.e., mobile equipment) operating onsite during reclamation.

As shown in the **Table 4.13-7**, ambient noise levels in the project vicinity already exceed the applicable *Kern County General Plan* and Noise Control Ordinance levels. Thus, it would be impossible for the project to result in noise levels less than 65 dB L_{dn}, even if the project were silent. For this reason, the Federal Interagency Commission on Noise (FICON) change criterion described below is utilized to determine the significance of project noise impacts.

FICON has developed a graduated scale for use in the assessment of project-related noise level increases. **Table 4.13-8, *Significance of Changes in Cumulative Noise Exposure***, was developed by FICON as a means of developing threshold criteria for project-related noise level increases. The rationale for the graduated scale is that test subject's reactions to increases in noise levels varied depending on the starting level of the noise.

Table 4.13-8 Significance of Changes in Cumulative Noise Exposure

Ambient Noise Level	Increase Required for Finding of Significance, dBA
<60 dBA	+5 dBA or more
60-65 dBA	+3 dBA or more
>65 dBA	+1.5 dBA or more

As shown in **Table 4.13-7**, above, project activities would not increase noise levels above the applicable FICON change criterion (1.5 dBA) at any receptor. Due to the large distance between project noise sources (i.e., reclamation equipment) and the closest project receptors, noise generated by onsite reclamation activities is estimated to be imperceptible at nearby residences. Therefore, the project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project (Sespe Consulting 2025j) and this impact would remain less than significant with implementation of Mitigation Measures **MM 4.13-1** and **MM 4.13-2**.

Mitigation Measures

MM 4.13-1 Within 30 days of the start of project reclamation activities, the project proponent/operator shall establish a Noise Disturbance Coordinator for the proposed project. The Noise Disturbance Coordinator shall be responsible for responding to any complaints about noise. The Noise Disturbance Coordinator shall determine the cause of the complaint and shall be required to implement reasonable measures to resolve the complaint. Contact information for the Noise Disturbance Coordinator shall be submitted to the Kern County Planning and Natural Resources Department.

MM 4.13-2 Within 30 days of the start of project reclamation activities,, a sign, legible at a distance of 50 feet, shall be posted at the intersection of the project's Primary Access Road with Oak Creek Road. The sign shall state a Reclamation Plan (Mojave Life of Mine Reclamation Plan Amendment Project [Conditional Use Permit 21, Map 197; Conditional Use Permit 46, Map 198]) has been approved for the site, and a telephone number where noise complaints can be registered with the Noise Disturbance Coordinator. Documentation that the sign has been posted shall be provided to the Kern County Planning and Natural Resources Department.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.13-2: The project would generate excessive ground borne vibration or ground borne noise levels.

The Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Assessment Manual (Federal Transit Administration 2018) and Caltrans's Transportation and Construction Vibration Guidance Manual (Caltrans 2020) documents provide guidelines for assessing vibration impacts resulting from construction activities. **Table 4.13-9, *Vibration Source Level for Common Equipment Sources***, lists vibration source levels for common types of construction equipment, in terms of peak particle velocity (PPV) in units of inches per second at a distance of 25 feet.

Table 4.13-9 Vibration Source Level for Common Equipment Sources

Equipment	PPV (in/sec) at 25 Feet
Vibratory Roller	0.210
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003
Vibratory Roller	0.210

Source: Sespe Consulting 2025j per Transportation and Construction Vibration Guidance Manual (Caltrans 2020) and Transit Noise and Vibration Impact Assessment Manual (Federal Transit Administration 2018).

To assess project vibration impacts at each receptor location, the reference PPV value of 0.089 inches per second (i.e., large bulldozer) is utilized. It is assumed that nothing larger or more powerful than a large bulldozer would operate at the project site during reclamation. The distance shown represents the measured distance from the closest boundary of the project site to the nearest property boundary of each receptor. **Table 4.13-10, *Predicted Project Vibration Levels at Receptors***, summarizes the predicted groundborne vibration impacts resulting from the project. Significance was determined by comparing the predicted change in groundborne vibration to the applicable Caltrans vibration threshold of 0.24 PPV (in/sec). As shown in the table, predicted vibration impacts to nearby receptors were well below the applicable Caltrans significance threshold of 0.24 PPV in/sec and this impact would be less than significant.

Table 4.13-10 Predicted Project Vibration Levels at Receptors

Receptors	Distance (feet)	Predicted Vibration PPV (in/sec)	Significance Threshold PPV (in/sec)	Significant?
1	5,400	0.00024	≥ 0.24	No
2	5,500	0.00024	≥ 0.24	No
3	6,450	0.00020	≥ 0.24	No

Table 4.13-10 Predicted Project Vibration Levels at Receptors

Receptors	Distance (feet)	Predicted Vibration PPV (in/sec)	Significance Threshold PPV (in/sec)	Significant?
4	17,650	0.00007	≥ 0.24	No
5	32,000	0.00003	≥ 0.24	No
6	31,700	0.00003	≥ 0.24	No
7	7,400	0.00017	≥ 0.24	No

Source: Sespe Consulting 2025j.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.13-3: The project would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

As discussed under **Impact 4.13-1** above, based on the noise monitoring and modeling results prepared by Sespe Consulting (2025j), implementation of the proposed project is not expected to generate noise at levels that would be considered a significant impact. Additionally, noise associated with the project would only be temporary during the period of final reclamation activities which are anticipated to require approximately two years following the completion of vested mining operations. The site would be reclaimed to open space which would not result in a permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Therefore, impacts are considered less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.13-4: For a project located within the Kern County Airport Land Use Compatibility Plan, would the project expose people residing or working in the project area to excessive noise levels.

The nearest airports to the project site are Mountain Valley Airport approximately 4.75 miles to the northwest, Tehachapi Municipal Airport approximately 7.25 miles to the northwest, and Mojave Airport, approximately 7.5 miles to the east. There are no private airstrips in the vicinity of the project site. Review of the Kern County Airport Land Use Compatibility Plan (ALUCP) concludes that the project site is not within the ALUCP; therefore, no impact would occur.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

No impact would occur.

Cumulative Setting, Impacts, and Mitigation Measures**Cumulative Setting**

The cumulative setting for noise is the buildout of the General Plan and the other projects in the vicinity of the project. **Section 3.7**, *Cumulative Effects Overview*, of this EIR discusses cumulative projects within a 6-mile radius of the project. **Table 3-15**, *Cumulative Projects List*, in **Chapter 3**, *Project Description*, lists specific projects considered in the cumulative impact analysis.

Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. A cumulative impact analysis first identifies whether a cumulatively significant impact exists in the given resource area. If one exists, the analysis then determines whether the project will make a considerable contribution to that impact. Where a cumulative impact is severe, even a small contribution may be considerable.

Impact 4.13-5: The project would contribute to cumulative noise and vibration impacts.

As noted above, the results of the project-related noise and vibration analysis for this project indicate that the project would have a less-than-significant impact. The project's contribution to the future noise and vibration levels would not result in a cumulatively considerable contribution to cumulative noise or vibration levels or impacts. No proposed projects have been identified within proximity to the project site that would substantially increase cumulative noise or vibration levels. The project would not result in a significant impact on either a project-specific or cumulative basis.

The noise and vibration levels associated with operation of the proposed project would be consistent with the standards established by the *Kern County General Plan* and Kern County Noise Ordinance. Additionally, noise levels associated with the proposed project would result in less-than-significant effects to surrounding sensitive receptors.

The proposed project would result in onsite reclamation-related noise sources during final reclamation activities. Based on the noise analysis prepared by Sespe Consulting (2025j), the proposed project would not result in significant noise or vibration level increases. Therefore, impacts to the cumulative noise and vibration setting associated with the proposed project would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Cumulative impacts would be less than significant.

Section 4.14

Public Services

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4.14.1 Introduction

This section of the Environmental Impact Report (EIR) addresses potential impacts of the project on public services, which include fire protection, law enforcement services, schools, parks, medical services, and other public facilities. This section also describes relevant environmental and regulatory settings and discusses mitigation measures to reduce impacts, where applicable. As discussed in greater detail below, no mitigation measures were identified as necessary to reduce potential impacts, as the project would not result in significant impacts to public services.

4.14.2 Environmental Setting

The Environmental Setting section discusses the setting for the public services analysis, providing a summary of fire and police protection, schools, parks, and other public facilities that have the potential to be affected by the project.

Fire Protection

The Kern County Fire Department (KCFD) provides primary fire protection, fire prevention, emergency medical, and rescue services to more than 500,000 people in unincorporated areas of Kern County and the Cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. The KCFD protects an area that covers more than 8,000 square miles and includes regional transportation corridors such as Interstate (I-) 5. KCFD operates 47 full-time fire stations within 7 battalions and over 521 uniformed firefighters. KCFD is equipped with 58 fire engines, 6 ladder trucks, 30 command vehicles, 6 dozers, 2 helicopters, 3 hazardous material response teams, and other ancillary vehicles and equipment (KCFD 2025).

The nearest KCFD fire station to the existing facility entrance from Oak Creek Road is Station 14, located at 1953 State Highway 58 in Mojave. Station 14 is approximately 8.5 miles (driving distance) to the east of the existing facility entrance from Oak Creek Road. Station 12 is the second nearest station to the project site and is located at 800 S. Curry Street in Tehachapi approximately 13 miles (driving distance) northwest of the existing facility entrance from Oak Creek Road and approximately 10 miles from the northwest corner of the site near the Tehachapi Willow Springs Road / Oak Creek Road intersection. It is anticipated that these stations would be the primary responders to a fire or emergency at the project site; however, in the event of a major fire, other stations would be called on to respond, as necessary.

The project site and KCFD Stations 12 and 14 are located within the KCFD Battalion 1 area. The Battalion 1 area consists of eight stations and covers 951,600 acres of which 351,276 acres is State Responsibility Area (SRA) land area, for which the California Department of Forestry and Fire Protection (CAL FIRE) has a legal responsibility to provide fire protection. The SRA

land area is bounded by the Mojave Desert on the east, the Tehachapi Mountains in the center, and the Central Valley to the west.

As new growth and development occurs within the County, additional personnel and/or facilities will be required to meet increased demands for service. Additionally, Kern County has mutual-aid agreements with the Los Angeles County Fire Department (LACFD) (as well as other emergency response agencies) in the event that KCFD is unable to be the primary responder to an emergency. The nearest LACFD fire station to the project site is Station 112, located at 8812 West Avenue in Lancaster approximately 30 miles south of the project site.

Kern County applies and utilizes the National Fire Code set forth by the National Fire Protection Association (NFPA), California Fire Code, California Building Code (CBC), and Kern County Ordinance Code to regulate fire safety.

Police Protection

Kern County Sheriff's Department

The Kern County Sheriff's Office (KCSO) provides law enforcement services in the project area. The KCSO, which enforces Federal, State, and local laws, is responsible for jail system management, bailiff and prisoner transportation services to the courts, search and rescue operations, coroner services, and civil processing (serving lawsuit papers), among other responsibilities. It also operates the Inmate Reception Center, Lerdo Maximum Security Facility, Lerdo Minimum/Medium Security Facility, Lerdo Pre-Trial Facility, Mojave Jail, and Ridgecrest Jail (KCSO 2025).

KCSO headquarters are located at 1350 Norris Road in the City of Bakersfield. In addition, there are 13 substations that provide patrol services, and all have access to department support services. Substations are staffed by police, investigators, and supervisors, and each substation has access to all department support services. The KCSO is staffed with approximately 1,202 sworn and civilian employees, 567 deputy sheriffs, 338 detention deputy positions, and 297 professional support staff (KCSO 2025). The project site is served by the nearest substation, the Mojave Substation which is located at 1771 State Highway 58 in Mojave, approximately 8.5 miles (driving distance) to the east of the existing facility entrance from Oak Creek Road. Under non-emergency response conditions, driving time between the station and the access drive intersection with Oak Creek is estimated at approximately 10 to 15 minutes with additional time required for access to the site.

Response time is defined as the time required to respond to a call for service, measured from the time a call is received until the time a patrol car arrives at the scene. Response times vary because the nearest responding patrol car may be anywhere in the patrol area and not at the nearest substation. Average response time for KCSO is 5 minutes or less for an emergency or immediate-response incident (e.g., a crime that is under way and/or a life-or-death situation) and 8 to 10 minutes for routine calls (e.g., a crime that has already occurred and/or an incident that is not life threatening). Response time to an emergency at or near the project site would vary depending on the level of demand at the substation at the time of the call. If demand is high, the response time will be longer than the average times given above.

California Highway Patrol

The California Highway Patrol (CHP) oversees response to emergency incidents on California's highways, assisting other public agencies responding to emergency incidents, and promoting the safe and efficient movement of people and goods on California's highways to minimize loss of life, injuries, and property damage. CHP officers patrol state highways and implement CHP's other law enforcement activities (e.g., drug interception, vehicle theft investigation and prevention, vehicle inspections, accident investigations, and public awareness campaigns) with the support of the non-uniformed personnel assigned to area and division offices.

CHP has eight divisions that provide services throughout California. The project site lies within the jurisdiction of the CHP's Inland Division, which operates 12 offices and 3 communications and dispatch centers (CHP 2025). The nearest Inland Division office to the project site is located at 1313 State Highway 58 in Mojave about 8.7 miles (driving distance) east of the project site.

Schools

The project site is located partially within the Tehachapi Unified School District boundaries, and partially within the Mojave Unified School District boundaries. The nearest schools to the project site are Mojave Jr./Sr. High School and Mojave Elementary School (both approximately 7.5 miles east of the project site in Mojave). Multiple other schools are also located in and around the communities of Mojave, Tehachapi, and Rosamond. As no schools are located within ¼ miles of the project site, this impact would be less than significant.

Parks

The Kern County Parks and Recreation Department operates and maintains about 40 neighborhood parks throughout the County, as well as several public buildings that also are used for recreational purposes. The department also operates and maintains eight regional parks: Buena Vista Aquatic Recreational Area, Greenhorn Mountain Park, Leroy Jackson Park, Kern River County Park, Lake Isabella, Lake Woollomes, Metro Recreation Center, and Tehachapi Mountain Park. These parks provide more than 19,422 acres of parkland for recreational purposes. The nearest developed public park facility to the site is Mojave East Park in the community of Mojave. The facility has a baseball field, basketball courts, and other active and passive use areas.

Other Public Facilities

The Kern County Public Health Services Department, Emergency Medical Services Division (EMS) is the lead agency for the EMS system in Kern County. Kern County EMS is responsible for coordinating all system participants, which includes the public, emergency service providers, and hospitals throughout the County. The department provides various training programs for Kern County EMS, such as certification and recertification for local EMS personnel (Kern County EMS 2012).

Adventist Health Tehachapi Valley Hospital is the nearest hospital and emergency room facility in Kern County to the project site, and is located at 1100 Magellan Drive, Tehachapi, approximately 10 miles northwest of the site.

Other public services include Federal post offices (including in Mojave nearest the project site) and County libraries (including the Mojave Public Library nearest the site).

4.14.3 Regulatory Setting

State

California Department of Forestry and Fire Protection

Under Title 14 of the California Code of Regulations (CCR), CAL FIRE has the primary responsibility for implementing wildfire planning and protection for State Responsibility Areas (SRAs). CAL FIRE develops fire safe regulations and issues fire safe clearances for land within the service areas of fire districts in each SRA. There are more than 31 million acres of California's privately-owned wildlands under CAL FIRE's jurisdiction (CAL FIRE 2022).

In addition to wildland fires, CAL FIRE's planning efforts involve responding to other types of emergencies that may occur on a daily basis, including residential or commercial structure fires, automobile accidents, heart attacks, drowning victims, lost hikers, hazardous material spills on highways, train wrecks, floods, and earthquakes. Through contracts with local government, CAL FIRE provides emergency services in 36 of California's 58 counties (CAL FIRE 2022).

CAL FIRE adopted updated Fire Hazard Severity Zone mapping for SRAs within Kern County in 2024 (CAL FIRE 2023). Fire hazard is a way to measure the physical fire behavior and use this information to predict the damage a fire is likely to cause. Fire hazard measurements include the speed at which a wildfire moves, the amount of heat the fire produces, and, most importantly, the burning fire brands (embers) that the fire sends ahead of the flaming front. The project site is located within an area designated as a "Moderate" and "High" fire hazard, as shown on **Figure 4.18-1, Fire Hazard Severity Zones for State Responsibility Areas**, in **Section 4.17, Wildfire**.

Local

Kern County General Plan

The project site is located within the *Kern County General Plan*, with a portion of the project site located within the Cameron Canyon Specific Plan. The policies, goals, and implementation measures in the *Kern County General Plan* and the *Cameron Canyon Specific Plan* applicable to public services as related to the project are provided below. The *Kern County General Plan* contains additional policies, goals, and implementation measures that are more general in nature and not specific to development such as the project; therefore, they are not listed below.

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

1.4 Public Facilities and Services

Policies

- **Policy 1.** New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.
- **Policy 6.** The County will ensure adequate fire protection to all Kern County residents.
- **Policy 7.** The County will ensure adequate police protection to all Kern County residents.

Implementation Measures

- **Implementation Measure B.** Determine local costs of County facility and infrastructure improvements and expansion which are necessitated by new development of any type and prepare a schedule of charges to be levied on the developer at the site of approval of the Final Map. This implementation can be effectuated by the formation of a County work group.
- **Implementation Measure L.** Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in the County shall not be approved unless adequate fire protection facilities and resources can be provided.

1.10 General Provisions

Goals

- **Goal 1.** Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving viable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

1.10.1 Public Services and Facilities

Policies

- **Policy 9.** New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure that it generates and upon which it is dependent.
- **Policy 15.** Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act (CEQA) documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.
- **Policy 16.** The developer shall assume full responsibility for costs incurred in service extension or improvements that are required to ensure the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.

Chapter 4. Safety Element

4.1 Introduction

Goals

- **Goal 1.** Minimize injuries and loss of life and reduce property damage.
- **Goal 2.** Reduce economic and social disruption resulting from earthquakes, fire, flooding, and other geologic hazards by assuring the continuity of vital emergency public services and functions.
- **Goal 6.** Prepare the County for effective response to, and rapid beneficial recovery from the occurrence of a catastrophic event.

4.6 Wildland and Urban Fire

Policies

- **Policy 1.** Require discretionary projects to assess impacts on emergency services and facilities.
- **Policy 3.** The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.
- **Policy 4.** Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.
- **Policy 6.** All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.

Implementation Measures

- **Implementation Measure A.** Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

Cameron Canyon Specific Plan

The policies, goals, and implementation standards in the *Cameron Canyon Specific Plan* applicable to public services as related to the project are provided below. The *Cameron Canyon Specific Plan* contains additional policies, goals, and implementation measures that are more general in nature and not specific to development such as the project; therefore, they are not listed below.

Land Use, Open Space, and Conservation Element

Section I. Physical Constraints

Goals

- **Goal 1.** To minimize the effects of faulting, slope, flooding, and soil erosion by guiding development away from areas subject to these constraints.

Policies

- **Policy 1.** Kern County will not permit new developments to be sited on land which is environmentally unsound to support such development.

- **Policy 5.** Development proposed in areas with steep slopes will be subject to the standards of the Hillside Development Ordinance. Regardless of the percentage of slope, development on hillsides will be required to be sited in the least obtrusive fashion minimizing the extent of topographic alteration.

Implementation Measures

- **Implementation Measure 6.** The Tehachapi Resource Conservation District shall be contacted for assistance in developing a soil management plan prior to any development involving grading or vegetation removal. The recommendations of the district shall be rigidly applied.
- **Implementation Measure 7.** Prior to the issuance of permits for development on erosive soils, a soils report shall be submitted. The recommendations of that report, combined with those of the Tehachapi Resource Conservation District, shall be implemented with any new grading and construction. Implementation measures for long-term maintenance and enhancement of soil resources within the Specific Plan shall be paramount in the formulation and approval of soils reports.

Section II. Public Facilities

Goal

- To provide adequate levels of public service to the Cameron Canyon area.

Policies

- **Policy 2.** New development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development, as well as ongoing operating and maintenance costs. Infrastructure costs will be estimated on a dwelling unit equivalency basis and levied at the time of approval of the final map. Infrastructure includes roads, drainage, erosion control, sewage disposal, and water systems.

Implementation Measures

- **Implementation Measure 1.** In evaluating a development application, Kern County will consider both its physical and fiscal impact on the local school district. If it is found that the district will require additional facilities or incur costs requiring additional local revenues, the development project could be required as a condition of approval to contribute funds to the district for the costs directly attributable to the project.

Section X. Seismic Safety and Safety Element

Goals

- **Goal 1.** To reduce the potential for loss of life, injury, and property damage resulting from natural disasters and environmental factors by limiting and regulating in areas of known hazards.

- **Goal 2.** To reduce economic and social disruption resulting from earthquakes, fire, flooding, and other geologic hazards by assuring the continuity of vital services and functions.
- **Goal 3.** To assist in the allocation of public resources in Kern County to develop information regarding geologic, fire, and flood safety hazards and to develop a systematic approach toward the protection of public health, safety, and welfare from such hazards.

Policies

- **Policy 2.** Areas of potential natural hazard will be identified on the plan by applicable constraint overlays.
- **Policy 4.** Development will also be guided by the policies of Section I of this plan that relates to physical constraints.

Implementation Standards

- **Implementation Standard 3.** “The Implementation Recommendations” of the Kern County Safety and Seismic Safety Element are hereby incorporated by reference as requirements.
- **Implementation Standard 5.** Development shall be subject to the implementation standards of the Physical Constraints section of Section 1. of this plan.

Kern County Wildland Fire Management

The Kern County Fire Department submits a unit Annual Strategic Fire Plan to CAL FIRE and it is posted on their Office of the State Fire Marshall website (<https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/pre-fire-planning>). The Annual Strategic Fire plan accomplishes the mission of the Kern County Fire Department (KCFD) by collecting and sharing information related to wildfire risk and response. This helps safeguard people, protect property, infrastructure, cultural heritage, and resources of Kern County.

Kern County also has a Community Wildfire Protection Plan (CWPP) that was updated in 2022 and covers the entirety of Kern County (Kern County 2022). The CWPP addresses hazards and risks of wildland fire throughout Kern County and makes recommendations for fuel reduction projects, public outreach and education, structural ignitability reduction, and fire response capabilities.

Capital Improvement Plan

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

In 2008, Kern County adopted a Capital Improvement Plan (CIP) that identifies the best current understanding of the public facilities that will be needed to accommodate new development anticipated through 2030 (Kern County 2007). The CIP further identified appropriate existing

facility demand standards to be used as a basis for estimating future facility needs and level of service. The adopted CIP includes a summary of proposed service levels for the included facilities and a conceptual list of planned projects, upon which the CIP was based. The scope of services includes parks, libraries, sheriff (public protection and investigation), fire, animal control, public health, landfill/transfer stations, and general government. Roads and sewer costs and impacts are not part of this program.

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

The purpose of the Public Facilities Mitigation Program is to identify impacts on public services and identify the monetary CEQA mitigation necessary to meet the facilities associated with that growth. The following categories have been identified to help determine which specific public needs would be impacted by the proposed project: countywide public protection facilities; sheriff patrol and investigation facilities; library facilities; animal control facilities; park facilities; fire facilities; waste management facilities; public health facilities; and general government facilities.

4.14.4 Impacts and Mitigation Measures

Methodology

Public services in the area were evaluated to determine whether they are adequate to provide needed services for the proposed project and whether they would be adversely affected by the proposed project. The evaluation is based on professional judgment, an analysis of project consistency with the goals and policies of the Kern County General Plan, and the significance criteria established by Appendix G of the State CEQA *Guidelines*.

For this analysis of potential impacts associated with public services, potential public service impacts of the project involving approximately five years of reclamation activities at the site (discussed further in **Chapter 3, Project Description**) are assessed against a baseline of anticipated site conditions and employment levels at the time vesting mining operations are completed.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect on public services. Both documents state that a project would normally be considered to have a significant impact related to public services if it would:

- a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
 - Fire Protection;
 - Police Protection;
 - Schools;
 - Parks; or,
 - Other Public Facilities.

Project Impacts

Impact 4.14-1: The project would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services.

Fire Protection

A community's requirements for fire protection facilities are based on the number of residents and workers in the primary service area. Service demand is tied primarily to population because emergency medical calls typically constitute the majority of responses provided by a fire department. As the population of the service area increases, so does the number of emergency calls and the need for fire protection and emergency response facilities. The proposed project provides for reclamation of a vested surface mine site and the project would not result in additional workers as compared to the vested operations baseline.

Current fire protection and prevention staff and facilities are sufficient to continue to provide fire protection and emergency response services to the project area. Because the project would not generate additional workers or otherwise generate increased population and is not expected to substantially increase wildland fire hazard (see **Section 4.18, *Wildfire***, for additional discussion), it is anticipated that personnel and equipment from KCFD Battalion 1 and Stations 12 and 14 would be sufficient to respond to fire at the project site.

As such, the project would not increase demand for County fire protection service and would not require new or physically altered government facilities associated with fire protection service.

Police Protection

KCSO provides police protection for the project site and surrounding areas, and the KCSO substation in Mojave provides primary law enforcement services to the project area. This substation is located approximately 8.5 miles east of the project site access road intersection

with Oak Creek Road. Additionally, the proposed project site is located approximately 8.7 miles west of the CHP's Mojave office. Both residents and workers in unincorporated portions of Kern County benefit from the patrol and investigation services provided by the KCSO. Demand for such services is related to the County's combined residential and worker populations in the unincorporated areas. The KCSO substation is responsible for serving a large area consisting of open space, rural areas, and communities. The substation is sufficiently equipped with staff and facilities capable of providing law enforcement services for the proposed project. The proposed project is not expected to require an expansion of existing law enforcement staff or facilities.

To ensure safety of the public and the facilities, signs are posted per Mine Safety and Health Administration (MSHA) requirements for vested mining operations, and would be maintained through the period of project reclamation activities. Access to the site would be controlled and limited to the areas surrounding the project site during active reclamation, thereby minimizing the need for police surveillance. The project would not increase traffic volumes along surrounding roadways as compared to baseline vested mining operations (conversely, project traffic trips during reclamation would be well below existing baseline levels associated with vested mining operations), and project personnel commuting to the project site via these roadways and haul truck drivers would be required to adhere to all traffic laws. Additionally, the existing ingress/egress access point would continue to sufficiently serve the site. The project would not adversely affect the KCSO's or the CHP's ability to patrol the roadways, and would not result in the need for new or physically altered facilities associated with police protection services.

Although it is conceivable that a need for emergency response could occur during onsite reclamation, such potential increase would be limited and is not expected to result in the need for new or physically altered governmental facilities to maintain acceptable service ratios, response times, or other performance objectives for police protection service.

Schools, Parks, and Other Public Facilities

The project would provide reclamation of a vested mining operation. The project would not increase the number of workers at the site compared to baseline conditions and the project would not have the potential to directly or indirectly induce population growth. Therefore, the project would not have the potential to increase the demand for schools, parks, or other public facilities (e.g., hospitals, libraries, post offices), and the project would not have the potential to result in adverse environmental effects associated with new or physically altered schools, parks, or other public facilities.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

The cumulative setting for the public services impacts includes buildout of the *Kern County General Plan*. The cumulative study area related to public services is based on the service area for each of the fire and police stations serving the proposed project site. Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. The geographic scope for cumulative impacts to public services includes closely related past, present, and reasonably foreseeable probable future projects. **Section 3.7, *Cumulative Effects Overview***, of this EIR discusses cumulative projects near the project. **Table 3-15, *Cumulative Projects List***, in **Chapter 3, *Project Description***, lists specific projects considered in the cumulative impact analysis.

Impact 4.14-2: The project would contribute to cumulative impacts on public services.

As discussed above, the project is not anticipated to result in an increased need for new or expanded public services or facilities. Over time, population growth in the project region will require additional emergency and medical services, school, and recreational facility capacity, however, the project would not add new jobs and would not contribute to the need for new public or expanded public services or public service facilities. Kern County recognizes through the *Kern County General Plan* that a need exists for discretionary development to contribute funding for future expansion of public service facilities. The *Kern County General Plan* contains the provision that new discretionary development pays its proportional share of local costs of infrastructure improvements required to service such development. Through these fees and the public services and facilities they are ultimately used for, impacts on public services caused by future projects are addressed. Because the project does not involve discretionary construction and the project would not create an increase in demand for public services, the project would not contribute to cumulative impacts associated with public services and is not anticipated to be subject to proportional fees for public services.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Cumulative impacts would be less than significant.

Section 4.15

Transportation

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4.15.1 Introduction

This section of the Environmental Impact Report (EIR) addresses potential impacts of the project on transportation and traffic, describes the environmental and regulatory settings, and discusses mitigation measures that would reduce impacts, where applicable. Information in this section is based on the *CEQA Transportation and Vehicle Miles Travelled (VMT) Memorandum – CalPortland Company, Proposed Mojave Mine Reclamation Plan Amendment* (Sespe Consulting 2025e), included in Appendix K of the EIR.

4.15.2 Environmental Setting

Regional and Local Roadway Facilities

The project is located approximately 6.0 miles southeast of the City of Tehachapi and 7.25 miles west of the town of Mojave, in the southeastern part of Kern County, California. The following is a description of the primary roadways in the vicinity of the project site, which are anticipated to be used to some extent by the project (**Figure 4.15-1, Project Location and Existing Street Network**).

State Route (SR-) 58 is a four-lane divided highway and runs in the east-west direction. SR 58 provides regional access to Bakersfield to the west and Barstow to the east. SR 58 is approximately 4 miles north of the project site.

SR 14 is a four-lane divided highway east of the project site, and runs in the north-south direction. For regional travel, residents of California City and other nearby communities rely primarily on SR 14, which carries traffic south to Lancaster and other major routes. SR 14 connects to SR 58 and SR 138 before reaching Interstate 5 (I-5) near Santa Clarita. SR 14 is approximately 7.5 miles east of the project site.

Oak Creek Road is an east-west, two-lane road traversing approximately 10.25 miles between Tehachapi-Willow Springs Road in the west to SR 14 at Mojave in the east. Oak Creek Road provides access to the Mojave Mine facility entrance driveway which is located approximately 3.5 miles east of the Oak Creek Road/Tehachapi-Willow Springs Road intersection.

Tehachapi -Willow Springs Road is a north-south, two-lane road approximately 20 miles long between Willow Springs in the south to SR 58 east of Tehachapi at its northern terminus. Tehachapi-Willow Springs Road bisects the project site.

Non-Motorized Transportation

There are no dedicated pedestrian or bicycle transportation facilities in the immediate vicinity of the project site or along the surrounding roadways.

Other Transit Facilities

Railways

The closest operated mainline railway in Kern County is the Union Pacific Railroad (UP) Mojave Subdivision between Bakersfield, South Mojave and the Kern/San Bernardino County Line just east of Boron. The westernmost portion of the line (3 miles) connects to the UP at Kern Junction, just east of the Bakersfield Amtrak station. BNSF trains operate on the UP's Mojave Subdivision between Kern Junction and South Mojave via trackage rights. The easternmost portion of the line (32 miles) connects with the UP at South Mojave. At its nearest point, the UP Mojave Subdivision line is about 7.5 miles east of the eastern boundary of the project site (or approximately 7.1 miles driving distance along Oak Creek road, from the point where the site access road intersects with Oak Creek Road) near Ansel (Wilbur Smith 2011). See *Public Transit* section below for discussion of commuter rail service.

The Oak Creek Industrial Lead (railroad spur line) extends between railroad track which parallels Highway 14 in the unincorporated community of Mojave, and the Mojave Cement Plant (operated by CalPortland Company) within the project site.

Public Transit

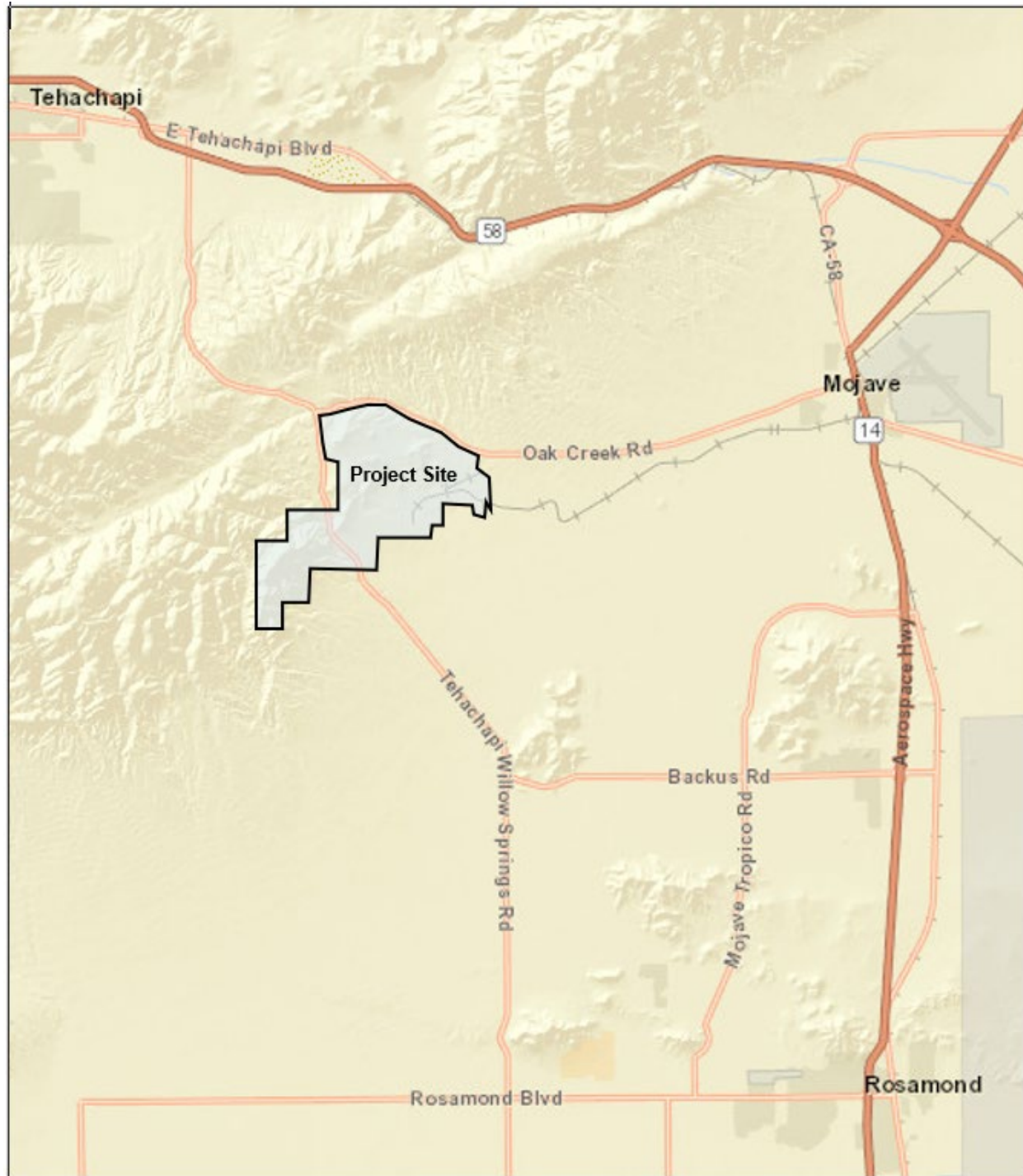
Public transportation in Kern County is provided by Kern Regional Transit, which offers 12 fixed routes throughout the County and a dial-a-ride public transportation service for residents in Frazier Park, Kern River Valley, Lamont, Mojave, Rosamond, and Tehachapi.

Airport Facilities

The project site is not located within the sphere of influence of any airport as identified by the Kern County Airport Land Use Compatibility Plan (ALUCP). The nearest airports to the project site are Mountain Valley Airport approximately 4.75 miles to the northwest, Tehachapi Municipal Airport approximately 7.25 miles to the northwest, and Mojave Airport, approximately 7.5 miles to the east. Other airport facilities within the project area include: Mojave Air and Space Port, a public airfield operated by the East Kern Airport District (EKAD) and located approximately 9 miles east of the project site; Edwards Air Force Base, a military base and airstrip located approximately 20 miles southeast of the project site; and California City Municipal Airport, a public airfield located approximately 17 miles northeast of the project site.

California High-Speed Rail

The California High-Speed Rail (HSR) Bakersfield to Palmdale section preferred alignment alternative was approved by the California High-Speed Rail Authority (CHSRA) Board of Directors August 19, 2021. Within the project area, the alignment runs generally north/south and through the project site generally parallel to and east of Tehachapi Willow Springs Road.



Source: California Department of Transportation 2019; Benchmark Resources 2025.

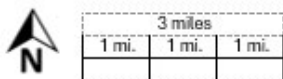


Figure 4.15-1
Project Location and Existing Street Network

4.15.3 Regulatory Setting

Federal

Federal Aviation Administration

The Federal Aviation Administration (FAA) regulates aviation at regional, public, and private airports. The FAA regulates objects affecting navigable airspace. According to Code of Federal Regulations (CFR) Title 14, Part 77.9, any person/organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA of:

- Any construction or alteration exceeding 200 feet above ground level;
- Any construction or alteration:
 - Within 20,000 feet of a public use or military airport that exceeds a 100:1 surface from any point on the runway where the longest airport runway exceeds 3,200 feet in actual length;
 - Within 10,000 feet of a public use or military airport that exceeds a 50:1 surface from any point on the runway where the longest airport runway is less than 3,200 feet in actual length; and
 - Within 5,000 feet of a public use heliport that exceeds a 25:1 surface;
- Any highway, railroad, or other traverse way whose prescribed adjusted height would exceed the above standards;
- When requested by the FAA; and
- Any construction or alteration located on a public use airport or heliport regardless of height or location.

Failure to comply with the provisions of Federal Aviation Regulation (FAR) Part 77 is subject to civil penalty under Section 902 of the Federal Aviation Act of 1958, as amended, and pursuant to United States Code (USC) Title 49, Section 46301(a).

State

California Department of Transportation

The California Department of Transportation (Caltrans) has jurisdiction over State highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. The following Caltrans regulations apply to potential transportation and traffic impacts of the proposed project:

- **California Vehicle Code (CVC), Division 15, Chapters 1 through 5 (Size, Weight, and Load):** Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.
- **California Street and Highway Code Sections 660-711, 670-695:** Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of State and County highways and

provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Local

Kern County General Plan

The *Kern County General Plan* Circulation Element sets forth goals, policies, and implementation measures related to transportation improvements. Issues discussed in the Circulation Element include new roads, upgrading of roads for future growth, scenic highway corridors, congestion management, truck transportation, and air and rail issues.

Chapter 2. Circulation Element

2.1 Introduction

Goals

- **Goal 4.** Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.
- **Goal 5.** Maintain a minimum Level of Service (LOS) D for all roads throughout the County unless the roads are part of an adopted Community Plan or Specific Plan which utilizes Smart Growth policies that encourage efficient multi-modal movements.

2.3 Highways

2.3.3 Highway Plan

Goals

- **Goal 5.** Maintain a minimum Level of Service (LOS) D.

Policies

- **Policy 1.** Development of roads within the County shall be in accordance with the Circulation Diagram Map. The charted roads are usually on section and midsection lines. This is because the road centerline can be determined by an existing survey.
- **Policy 2.** This plan requires, as a minimum, construction of local road widths in areas where the traffic model estimates little growth through and beyond Year 2010. Where Planning Department's growth estimates indicate more than a local road is required, expanded facilities shall be provided. The timing and scope of required facilities should be set up and implemented through the Kern County Land Division Ordinance. However, the County shall routinely protect all surveyed section lines in the Valley and Desert Regions for arterial right-of-way. The County shall routinely protect all mid-section lines for collector highways in the same regions. The only possible exceptions shall be where the County adopts special studies and where Map Code 4.1 (Accepted County Plan) areas occur. In the Mountain Region where terrain does not allow construction on surveyed section and mid-section lines, right-of-way width shall be the size shown on the diagram map. No surveyed section and mid-section "grid" will comprehensively apply to the Mountain Region.
- **Policy 3.** This plan's road width standards are listed below. These standards do not include State highway widths that would require additional right-of-way for rail transit,

bike lanes and other modes of transportation. Kern County shall consider these modifications on a case-by-case basis.

- Expressway [Four Travel Lanes] Minimum 110-foot right-of-way
- Arterial [Major Highway] Minimum 110-foot right-of-way (County Standard 110-feet);
- Collector [Secondary Highway] Minimum 90-foot right-of-way (County Standard 90-feet);
- Commercial-Industrial Street Minimum 60-foot right-of-way (County Standard 60-feet);
- Local Street [Select Local Road] Minimum 60-foot right-of-way (County Standard 60-feet).

Implementation Measure

- **Implementation Measure A.** The Planning Department shall carry out the road network Policies by using the Kern County Land Division Ordinance and Zoning Ordinance, which implements the Kern County Development Standards that include road standards related to urban and rural planning requirements. These ordinances also regulate access points. Planning Department can help developers and property owners in identifying where planned circulation is to occur.

2.3.4 Future Growth

Goals

- **Goal 1.** To provide ample flexibility in this plan to allow for growth beyond the 20-year planning horizon.

Policies

- **Policy 2.** The County should monitor development applications as they relate to traffic estimates developed for this plan. Mitigation is required if development causes affected roadways to fall below LOS D. Utilization of the California Environmental Quality Act (CEQA) process would help identify alternatives to or mitigation for such developments. Mitigation could involve amending the Land Use, Open Space, and Conservation Element to establish jobs/housing balance if projected trips in any traffic zone exceed trips identified for this Circulation Element. Mitigation could involve exactions to build off-site transportation facilities. These enhancements would reduce traffic congestion to an acceptable level.
- **Policy 4.** As a condition of private development approval, developers shall build roads needed to access the existing road network. Developers shall build these roads to County standards unless improvements along State routes are necessary, then roads shall be built to Caltrans standards. Developers shall locate these roads (width to be determined by the Circulation Plan) along centerlines shown on the circulation diagram map unless otherwise authorized by an approved Specific Plan Line. Developers may build local roads along lines other than those on the circulation diagram map. Developers would negotiate necessary easements to allow this.

- **Policy 5.** When there is a legal lot of record, improvement of access to county, city or State roads will require funding by sources other than the County. Funding could be by starting a local benefit assessment district or, depending on the size of a project, direct development impact fees.
- **Policy 6.** The County may accept a developer's road into the County's maintained road system. This is at Kern County's discretion. Acceptance would occur after the developer follows the above requirements. Roads are included in the County road maintenance system through approval by the Board of Supervisors.

Implementation Measures

- **Implementation Measure A.** The County should relate traffic levels to road capacity and development levels. To accomplish this Roads Department and Planning Department should set up a monitoring program. The program would identify traffic volume to capacity ratios and resulting level of service. The geographic base of the program would be traffic zones set up by Kern Council of Governments.
- **Implementation Measure C.** Project development shall comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.

2.5 Other Modes

2.5.1 Trucks and Highways

- The Kern County road network handles a high ratio of heavy truck traffic. State highways carry most of this traffic. Most of the trucks are interstate carriers. As such, interstate trucking is not under the direct control of County officials. In as much as this traffic affects County residents and taxpayers, they need actions to guarantee State highways in Kern County receive a fair share of California's transportation investment.

Goals

- **Goal 1.** Provide for Kern County's heavy truck transportation in the safest way possible.
- **Goal 2.** Reduce potential overweight trucks.
- **Goal 3.** Use State Highway System improvements to prevent truck traffic in neighborhoods.

Policies

- **Policy 1.** Caltrans should be made aware of the heavy truck activity on Kern County's roads.
- **Policy 2.** Start a program that monitors truck traffic operations.
- **Policy 3.** Promote a monitoring program of truck lane pavement condition.

Chapter 4. Safety Element

4.6 Wildland and Urban Fire

Policies

- **Policy 4.** Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.

Cameron Canyon Specific Plan

The purpose of the *Cameron Canyon Specific Plan* Circulation Element is to provide the framework for a system of roads to serve the plan area.

Section VII. Circulation Element

Goals

- **Goal 1.** To provide for the efficient movement of traffic into, out of, and through the Specific Plan area.
- **Goal 2.** To provide a network of major roads consistent with County Circulation policies and a secondary road for internal circulation within the plan area.

Kern Council of Governments Congestion Management Program

All urbanized areas with a population larger than 200,000 residents are required to have a Congestion Management System, program, or process. The Kern COG refers to its congestion management activities as the Congestion Management Program (CMP); Kern COG was designated as the Congestion Management Agency.

The CMP provides a systematic process for managing congestion and information regarding: (1) transportation system performance, and (2) alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet State and local needs. The purpose of the CMP is to ensure that a balanced transportation system is developed that relates population growth, traffic growth, and land use decisions to transportation system LOS performance standards and air quality improvement. The program attempts to link land use, air quality, transportation, and advanced transportation technologies as integral and complementary parts of this region's plans and programs.

The purpose of defining the CMP network is to establish a system of roadways that will be monitored in relation to established LOS standards. At a minimum, all State highways and principal arterials must be designated as part of the Congestion Management System of Highways and Roadways. Kern County has 18 designated State highways.

2022 Regional Transportation Plan/Sustainable Communities Strategy

The latest Regional Transportation Plan (RTP) was prepared by Kern COG and was adopted on July 21, 2022. The 2022 RTP is a 24-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It has been developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between Federal, State, regional, and local agencies. Included in the 2022 RTP is the

Sustainable Communities Strategy (SCS) required by California's Sustainable Communities and Climate Protection Act of Senate Bill (SB) 375. The California Air Resources Board (CARB) set Kern County greenhouse gas (GHG) emissions reductions from passenger vehicles and light-duty trucks at 9% per capita by 2020 and 15% per capita by 2035, as compared to 2005. In addition, SB 375 provides for closer integration of the RTP/SCS with the Regional Housing Needs Allocation (RHNA), ensuring consistency between low-income housing needs and transportation planning. Kern COG engaged in the RHNA process concurrently with the development of the 2022 RTP. This process required Kern COG to work with its member agencies to identify areas within the region that can provide sufficient housing for all economic segments of the population and ensure that the State's housing goals are met.

The intent of the SCS is to achieve the State's emissions reduction targets for automobiles and light trucks. The SCS also provides opportunities for a stronger economy, healthier environment, and safer quality of life for community members in Kern County. The RTP/SCS seeks to improve economic vitality, air quality, the health of communities, and transportation and public safety; promote the conservation of natural resources and undeveloped land; and increase access to community services, regional and local energy independence, and opportunities to help shape the community's future.

The 2022 RTP/SCS financial plan identifies how much money is available to support the region's transportation investments. The plan includes a core revenue forecast of existing Federal, State, and local sources along with funding sources that are considered to be reasonably available over the time horizon of the RTP/SCS. These new sources include adjustments to State and Federal gas tax rates based on historical trends and recommendations from two national commissions (National Surface Transportation Policy and Revenue Study Commission, and National Surface Transportation Infrastructure Financing Commission), leveraging of local sales tax measures, local transportation impact fees, potential national freight program/freight fees, future state bonding programs, and mileage-based user fees.

The 2022 RTP promotes a more efficient transportation system that calls for fully funding alternative transportation modes, while emphasizing transportation demand and transportation system management approaches for new highway capacity. The Constrained Program of Projects includes projects that move the region toward a financially constrained and balanced system. Constrained projects have undergone air quality conformity analysis to ensure that they contribute to the Kern region's compliance with Federal and State air quality rules.

Kern County Airport Land Use Compatibility Plan

The Kern County ALUCP establishes procedures and criteria to assist Kern County and affected incorporated cities in addressing compatibility issues between airports and surrounding land uses. The project area is not located within the sphere of influence of any airport as identified by the Kern County ALUCP. The nearest airports to the project site are Mountain Valley Airport approximately 4.75 miles to the northwest, Tehachapi Municipal Airport approximately 7.25 miles to the northwest, and Mojave Airport, approximately 7.5 miles to the east.

4.15.4 Impacts and Mitigation Measures

This section describes the impact analysis relating to transportation and traffic for the proposed project. It describes the methods used to determine the impacts of the project and lists the thresholds used to determine the significance of each impact. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, where applicable.

Methodology

CEQA Guidelines Section 15064.3(b)(4) discusses methodology for analyzing transportation impacts, in part stating, “A lead agency has discretion to choose the most appropriate methodology to evaluate a project’s vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure.” For the analysis in this EIR, the project’s vehicle miles traveled (VMT) are presented based on the project’s estimated daily worker vehicle trips and vehicle miles traveled in comparison to thresholds discussed in the Governor’s Office of Planning and Research (OPR) December 2018 *Technical Advisory on Evaluating Transportation Impacts in CEQA* as discussed in more detail in the *CEQA Transportation and Vehicle Miles Travelled (VMT) Memorandum* (Sespe Consulting 2025e) included in Appendix K of this EIR.

The evaluation also assesses the project’s potential to conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, increase hazards or result in inadequate emergency access to the site. For this EIR, these assessments provide a qualitative discussion of the project’s potential to result in such impacts.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect on transportation and traffic. Both documents state that a project would normally be considered to have a significant impact related to transportation and traffic if it would:

- a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
- b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b);
- c. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- d. Result in inadequate emergency access.

Project Impacts

Impact 4.15-1: The project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

The project would require both light duty vehicles/automobiles and heavy-duty haul trucks to travel to and from the site each day to conduct reclamation activities, however, these trips would not exceed the existing trip count associated with the vested mining operations currently occurring at the site, and would therefore not conflict with a program, plan, ordinance, or policy addressing the circulation system. Conversely, reclamation vehicle activity is expected to be far less than associated with existing vested mining operations, which include many more onsite employees, cement/product deliveries, and other ancillary vehicles. Additionally, the project would not change the manner in which vehicles access the project site onto adjacent public roadways, or require the construction of new access driveways and/or alterations to nearby public roadways, or bicycle/pedestrian facilities. The existing ingress/egress access point (where the site access road intersects with Oak Creek Road) would continue to sufficiently serve the site (Sespe Consulting 2025e). Access to the project site west of Tehachapi Willow Springs Road is via an existing access point along Tehachapi Willow Springs Road which bisects the southwestern portion of the site; an additional access point along Tehachapi Willow Springs Road to provide access to the project site west of Tehachapi Willow Springs Road may potentially be established in the future at a location yet to be determined.

Furthermore, reclamation activities would be temporary, with active reclamation requiring approximately two years to complete. Additionally, because the project location is an existing vested mining operation, the location of the reclamation activities is fixed and not subject to discretionary decisions. As such, the reclamation activities and trip levels would not result in permanent long-term impacts on the roadways within the vicinity of the project site.

While the HSR's preferred alignment would run through the project site, the project's reclamation activities would not have any impact on the HSR facilities. Ongoing vested mining operations are not part of the project.

For these reasons, the project would not impact County programs, plans, ordinances, or policies related to transit, roadway, bicycle, or pedestrian facilities, and no new impacts or mitigation measures are required.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.15-2: The project would conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b).

The project's reclamation-related vehicle trips will be generated by slope preparation (grading and application of stockpiled growth media), hydroseeding exposed slopes, plant demolition,

plant removal, and monitoring/project oversight. RS Means was used by Sespe Consulting (2025e) to identify the components and productivity of a hydroseeding crew and demolition crew. The RS Means guidance provides that a 5-person hydroseed crew can cover 80,000 square feet per day (about 1.8 acres) or about 550 acres per year if the crew works 300 days. Each crew is expected to create 5 round trips per day, and slope preparation was assumed for 150 days per year that will generate 5 round trips per day, while monitoring and oversight will occur 150 days per year and generate 2 round trips per day (Sespe Consulting 2025e). While the actual hydroseed crew sizes and activity levels would fluctuate over the approximate 2-year active reclamation phase, the RS Means guidance provides appropriate data to conservatively estimate the number of daily vehicle trips/VMTs associated with hydroseeding activities as part of site reclamation.

Reclamation-related vehicle trips will also be generated by the cement plant demolition, and equipment/material disposal. Demolition will be completed using onsite equipment and hauled from the site using on-road haul trucks. The total weight of demolition material that would be transported from the project site is estimated by Sespe Consulting (2025e) to be approximately 60,000 tons requiring approximately 2,400 trips. Sespe Consulting's analysis assumed demolition operations will take place 5 days per week, 250 days per year and that there will be 15 round trips per day for additional employees during cement plant demolition (Sespe Consulting 2025e).

Table 4.15-1, *Project Daily and Annual Trip Generation Summary*, summarizes the Sespe Consulting (2025e) trip generation estimates and described above.

Table 4.15-1 Project Daily and Annual Trip Generation Summary

Reclamation Activity	Days/ Year	Roundtrips/ Day	Roundtrips/ Year	One-Way Trips/Day	One-Way Trips /Year
Reclamation Worker Trips					
<i>Hydroseeding</i>	300	5	1,500	10	3,000
<i>Slope Preparation</i>	150	5	750	10	1,500
<i>Monitoring</i>	150	2	300	4	600
Reclamation Worker Trips Subtotal		12	2,550	24	5,100
Cement Plant Demolition Trips					
<i>Haul Trucks</i>	250	6	1,500	12	3,000
<i>Removal Personnel</i>	250	15	3,750	30	7,500
Cement Plant Demolition Subtotal		21	5,250	42	10,500
Total		33	7,800	66	15,600

Source: Sespe Consulting 2025e.

Based on information summarized above, the maximum number of employees that would operate onsite each day during reclamation activities would be up to 27 employees (i.e., 12 for

conventional reclamation activities (e.g., hydroseeding, slope preparation, and monitoring), and 15 for demolition/salvage), which would result in up to 54 one-way trips per day. To estimate the average commute distance for each employee travel, Sespe Consulting (2025e) utilized default trip lengths from the California Emissions Estimator Model (CalEEMod). Specifically, CalEEMod notes that the average home-to-work roundtrip length within rural areas of Kern County-Mojave Desert region is approximately 16.8 miles (CalEEMod, 2021). Therefore, Sespe estimated that the project would result in approximately 16.8 VMTs per employee per day, generating a total of 453.6 VMTs per day as shown in **Table 4.15-2, Estimated Employee Vehicle Miles Traveled (VMT)** (Sespe Consulting 2025e).

Table 4.15-2 Estimated Employee Vehicle Miles Traveled (VMT)

Equipment/Vehicle	Onsite Employees/ Day	Roundtrips/ Day	One-Way Trips/ Day	Average Roundtrip Distance (miles)	Average Daily VMT
Reclamation Employee Automobiles	27	27	54	16.8	453.6

Source: Sespe Consulting 2025e.

CEQA Guidelines 15064.3(a) clarifies that the primary consideration in evaluating a project's transportation impacts for CEQA purposes is the amount and distance that a project might cause people to drive. This captures two measures of transportation impacts: 1) the number of automobile trips generated; and 2) VMT. As described above, up to 27 employees would operate onsite each day during the project reclamation activities, which would result in 27 automobile roundtrips (or 54 one-way trips) per day. This number of employees and their associated trips would be a small portion of the existing employee trips associated with the vested mining operations. For this reason, and because the project is expected to generate far less than the OPR guidance threshold of 110 trips per day for employee commute trips, the project may be screened out from the need for further VMT analysis for employee commute trips in accordance with the OPR guidance (Sespe Consulting 2025e).

As shown in **Table 4.15-2**, it is estimated that the project would generate a total of approximately 453.6 VMTs per day due to onsite employees travelling to and from the facility during reclamation activities; however, because the project may be screened out from further VMT analysis per OPR's guidance, the daily VMT is provided for information purposes and does not indicate a project impact under CEQA. Additionally, as noted above, because the project location is an existing vested mining operation, the location of the reclamation activities and the automobile trips associated with reclamation are fixed and necessary to ensure the project site can be fully reclaimed in accordance with SMARA. In addition, the temporary character of reclamation-related trips (approximately two years for completion of final reclamation) would not generate new VMTs on a permanent basis. For these reasons, while the project is not a land use project as defined within OPR's guidance, and instead is a unique, temporary, and statutorily-required activity at a pre-determined location, the project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3(b). Thus, the project

would result in less-than-significant transportation impacts due to employee trips and associated automobile VMT. (Sespe Consulting 2025e)

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.15-3: The project would substantially increase hazards due to a design feature.

The project would not require permanent changes or increases in the number of daily vehicle trips traveling to and from the site each day, or changes to the existing ingress/egress access point, compared to existing/baseline operations associated with the vested mining operations. As such, the project would not affect public roadways which could create hazards due to geometric design features or incompatible uses. No public road improvements are proposed or predicted to be required as a result of the project, and no temporary road closures are predicted to be required during project reclamation activities. While some roadway improvements may be made throughout the life of the vested mining operations, these improvements would not be related to the project or onsite reclamation, and any future improvements would be completed in coordination with the County, as applicable. Changes to roadways during vested mining are not a component of the project, as the project being considered is the reclamation activities within the project site. For these reasons, the project would not result in alterations to nearby roadways, installation, or expansion of new driveways or geometric design features, or creation of incompatible uses along these roadways, and no impact would occur (Sespe Consulting 2025e).

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.15-4: The project would result in inadequate emergency access.

The project would not result in permanent changes or increases to the number of existing daily vehicle trips, as the reclamation activities would be temporary and are expected to be completed within approximately two years of initiation of the reclamation. Although in the short term the project would generate vehicle trips traveling to and from the project site during reclamation, these vehicles would continue to use the existing site ingress/egress access point(s) and would not impact County roadway networks or require alterations or temporary closures of public roadways. Furthermore, the estimated trip count associated with the project does not exceed the existing trips associated with the vested mining operations. Therefore, public roadways would continue to have sufficient capacity to serve the existing number of vehicles traveling to and from the project and provide adequate access for emergency vehicles. For these reasons,

the project would not impede existing emergency access in the project vicinity, and no impacts would occur (Sespe Consulting 2025e).

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

Section 3.7, *Cumulative Effects Overview*, of this EIR discusses cumulative projects near the project. (Table 3-15, *Cumulative Projects List*, in Chapter 3, *Project Description*, lists specific projects considered in the cumulative impact analysis.) The geographic scope for transportation and traffic cumulative impacts is the area of southeastern Kern County, within which the majority of project-related vehicle trips would occur.

Impact 4.15-5: The project would contribute to cumulative transportation and traffic impacts.

With regard to a cumulative increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system resulting in a conflict to applicable plans, ordinances, and policies, as well as cumulatively exceeding LOS standards on County roads or State highways, future development of Kern County would result in additional vehicle trips and contribute to congestion on area roadways that would likely be traveled by vehicles associated with the project. In addition, future residential development of Kern County would increase the overall number of vehicle trips within the County through the increase in population.

As discussed in Impacts 4.15-1 through 4.15-4, the project is not predicted to result in any project-specific transportation-related impacts and is not predicted to contribute to potential safety hazards and regional emergency access. Conversely, vehicle trips associated with the project would be temporary, and would be less than the number of existing trips associated with the vested mining operations currently occurring at the site. Thus, potential transportation-related impacts would be less than significant under both project-specific considerations and cumulative conditions.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

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Section 4.16
Tribal Cultural Resources

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Section 4.16

Tribal Cultural Resources

4.16.1 Introduction

This section of the Environmental Impact Report (EIR) provides an assessment of potential impacts related to tribal cultural resources that could result from implementation of the proposed project. The analysis in this section is based on the results of the Native American consultation conducted by Kern County for purposes of compliance with California Environmental Quality Act (CEQA) requirements prompted by Assembly Bill (AB) 52, which is discussed in the Regulatory Setting section below. Additional information regarding cultural resources is provided in **Section 4.5, *Cultural Resources***, of this EIR.

Information regarding cultural resources in **Section 4.5, *Cultural Resources***, and this section is based in part on the following studies prepared for the project:

- *A Phase I Cultural Resource Inventory for the Mojave Mine Life Project, Kern County, California*, prepared by EM Strategies August 2021, (EM Strategies 2021) redacted version included in Appendix E.1 of this EIR; and
- *Phase II Cultural Resources Eligibility Evaluations, CalPortland Mojave Facility Project, Kern County, California*, prepared by BCR Consulting, LLC., dated July 17, 2025, (BCR 2025) redacted version included in Appendix E.2 of this EIR.

These studies were conducted in compliance with Section 5024.1 of the California Public Resources Code (PRC) and CEQA to identify archaeological, historic built architectural, and other cultural resources in the project area. The scope of these studies and information regarding cultural resources identified in association with the site is discussed in **Section 4.5, *Cultural Resources***, of this EIR.

4.16.2 Environmental Setting

Existing Tribal Cultural Resources

Native American Correspondence and Assembly Bill 52 Consultation

On July 8, 2024, Kern County sent consultation notification letters via certified mail to Native American groups on Kern County's Master List pursuant to the requirements of AB 52 pertaining to government-to-government consultation. **Table 4.16-1, *Summary of AB 52 Consultation Efforts***, summarizes Kern County's consultation efforts to date.

Table 4.16-1 Summary of AB 52 Consultation Efforts

Tribes/Organization	Consultation Type	Date Letter Mailed	Response Received
Tejon Indian Tribe (Attn: Candice Garza)	AB 52	7/8/24	No response or request for consultation was received from Tejon Indian Tribe.
Torres Martinez Desert Cahuilla Indians (Attn: Michael Mirelez, Cultural Resources Coordinator)	AB 52	7/8/24	No response or request for consultation was received from Torres Martinez Desert Cahuilla Indians.
Twenty-Nine Palms Band of Mission Indians (Attn: Anthony Madrigal Jr., Tribal Grants Administrator)	AB 52	7/8/24	No response or request for consultation was received from Twenty-Nine Palms Band of Mission Indians.
Twenty-Nine Palms Band of Mission Indians (Attn: Darrell Mike, Tribal Chairman)	AB 52	7/8/24	No response or request for consultation was received from Twenty-Nine Palms Band of Mission Indians.
Yuhaaviatam of San Manuel Nation (Attn: Alexandra McCleary, Ph.D.)	AB 52	7/8/24	On July 15, 2024, Eunice Ambriz, Cultural Resources Technician, replied via email to Kern County (Randall Cates) on behalf of Yuhaaviatam of San Manuel Nation, expressing appreciation for the opportunity to review project documentation and advising that the project is located outside of the Serrano ancestral territory and that the Yuhaaviatam of San Manuel Nation would not be requesting consultation party status.

4.16.3 Regulatory Setting

Federal

National Historic Preservation Act Section 106

Archaeological resources are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (16 United States Code [USC] 470f), and its implementing regulation, Protection of Historic Properties (36 Code of Federal Regulations [CFR] Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing a federal “undertaking” (e.g., issuing a Federal permit), Section 106 of the NHPA requires Federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the NRHP. As indicated in NHPA Section 101(d)(6)(A), properties of traditional religious and cultural

importance to a Tribe are eligible for inclusion in the NRHP. Under the NHPA, a resource is considered significant if it meets the NRHP listing criteria at 36 CFR 60.4.

National Register of Historic Places

The National Register of Historic Places (NRHP) was established by the NHPA, as “an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation’s historic resources and to indicate what properties should be considered for protection from destruction or impairment” (36 CFR Section 60.2). The NRHP recognizes both historical-period and prehistoric properties, including archaeological sites, that are significant at the national, State, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria (U.S. Department of the Interior 1995):

- A. Are associated with events that have made a significant contribution to the broad patterns of our history;
- B. Are associated with the lives of persons significant in our past;
- C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for NRHP listing (U.S. Department of the Interior 1995).

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as “the ability of a property to convey its significance” (U.S. Department of the Interior 1995). The NRHP recognizes seven qualities that, in various combinations, define integrity. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from Federal and Tribal lands. NAGPRA clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. NAGPRA requires any Federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American Tribe claiming affiliation.

State

California Register of Historical Resources

Under PRC Section 5024.19(a), the California Register of Historical Resources (CRHR) was created in 1992, and implemented in 1998, as “an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the State’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change.” Certain properties, including those listed in, or formally determined eligible for listing in, the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historic resources surveys or designated by local landmarks programs, may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

- **Criterion 1.** It is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
- **Criterion 2.** It is associated with the lives of persons important in our past.
- **Criterion 3.** It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
- **Criterion 4.** It has yielded, or may be likely to yield, information important in history or prehistory.

Furthermore, under PRC 5024.1, Title 14 California Code of Regulations (CCR) Section 4852(c), a cultural resource must retain integrity to be considered eligible for the CRHR. Specifically, it must retain sufficient character or appearance to be recognizable as a historical resource and convey reasons of significance. Integrity is evaluated with regard to retention of such factors as location, design, setting, materials, workmanship, feeling, and association. Cultural sites that have been affected by ground-disturbing activities, such as farming, often lack integrity because they have been directly damaged or moved from their original location, among other changes.

Typically, an archaeological site in California is recommended eligible for listing in the CRHR based on its potential to yield information important in prehistory or history (Criterion 4). Important information includes chronological markers such as projectile point styles or obsidian artifacts that can be subjected to dating methods or undisturbed deposits that retain their stratigraphic integrity. Sites such as these have the ability to address research questions. However, archaeological sites may also be recommended eligible under CRHR Criteria 1, 2, and/or 3.

California Historical Landmarks

California Historical Landmarks are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical,

religious, experimental, or other value and that have been determined to have Statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the Kern County Board of Supervisors (or the City or Town Council in whose jurisdiction it is located); be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. The specific standards now in use were first applied in the designation of California Historical Landmark #770. California Historical Landmarks #770 and above are automatically listed in the CRHR.

To be eligible for designation as a landmark, a resource must meet at least one of the following criteria:

- 1) It is the first, last, only, or most significant of its type in the State or within a large geographic region (northern, central, or southern California);
- 2) It is associated with an individual or group having a profound influence on the history of California; or
- 3) It is a prototype of, or an outstanding example of, a period, style, architectural movement, or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events that are of local (County or City) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a Landmark and a Point. If a Point is later granted status as a Landmark, the Point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a Point of Historical Interest, a resource must meet at least one of the following criteria:

- 1) It is the first, last, only, or most significant of its type within the local geographic region (County or City);
- 2) It is associated with an individual or group having a profound influence on the history of the local area; or
- 3) It is a prototype of, or an outstanding example of, a period, style, architectural movement, or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State and is codified at PRC Section 21000 et seq. CEQA requires Lead Agencies to determine if a

proposed project would have a significant effect on the environment, including significant effects on historical or archaeological resources.

Under CEQA (Section 21084.1), a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. The State CEQA *Guidelines* (14 CCR Section 15064.5) recognize that a historical resource includes:

- 1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR;
- 2) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and
- 3) Any object, building, structure, site, area, place, record, or manuscript which a Lead Agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the Lead Agency, provided the Lead Agency's determination is supported by substantial evidence in light of the whole record.

The fact that a resource does not meet the three criteria outlined above does not preclude the Lead Agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

If a Lead Agency determines that an archaeological site is a historical resource, the provisions of CEQA Section 21084.1 and State CEQA *Guidelines* Section 15064.5 apply. If a project may cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired) in the significance of a historical resource, the Lead Agency must identify potentially feasible measures to mitigate these effects (State CEQA *Guidelines* Sections 15064.5(b)(1) and (4)).

If an archaeological site does not meet the historical resource criteria contained in the State CEQA *Guidelines*, then the site may be treated in accordance with the provisions of Section 21083, which is a unique archaeological resource. As defined in CEQA Section 21083.2, a unique archaeological resource is an archaeological artifact, object, or site for which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site is to be treated in accordance with the provisions of Section 21083.2, which state that if the Lead Agency determines that a project would have a significant effect on unique archaeological resources, the Lead Agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place (Section 21083.2(b)). If preservation in place is not feasible, mitigation measures shall be required.

The State CEQA *Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (State CEQA *Guidelines* Section 15064.5(c)(4)).

Native American Heritage Commission

PRC Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

Assembly Bill 52 and Related Public Resources Code Sections

AB 52 was approved by California State Governor Edmund Gerry “Jerry” Brown, Jr. on September 25, 2014. The act amended PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation (NOP) or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the CRHR or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a Lead Agency, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources update to Appendix G of the State CEQA *Guidelines*, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 requires that within 14 days of a Lead Agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the Lead Agency provide formal notification to the designated contact, or a tribal representative, of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the Lead Agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the Lead Agency’s formal notification and the Lead Agency must begin consultation within 30

days of receiving the tribe's request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project's impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2(b)).

If a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the Lead Agency, or otherwise failed to engage in the consultation process, or if the Lead Agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the Lead Agency may certify an EIR or adopt an MND (PRC Section 21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the Lead Agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the Lead Agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

California Public Records Act

Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public related to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports maintained by, or in the possession of, the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another State agency, or a local agency, including the records that the agency obtains through a consultation process between a California Native American tribe and a state or local agency."

California Native American Graves Protection and Repatriation Act

Codified in California Health and Safety Code Sections 8010–8030, the California Native American Graves Protection and Repatriation Act (Cal NAGPRA) is consistent with the Federal NAGPRA. Intended to "provide a seamless and consistent state policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect,"

Cal NAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The Cal NAGPRA also provides a process for non- Federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

California Health and Safety Code Sections 7050 and 7052

California Health and Safety Code Section 7050.5 declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbance must cease and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

California Penal Code Section 622.5

California Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

Public Resources Code Section 5097.5

PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

Local

Kern County General Plan

The policies, goals, and implementation measures in the *Kern County General Plan* that specifically address tribal cultural resources and are applicable to the project are provided below. The *Kern County General Plan* also includes broader policies, goals, and implementation measures that are general in nature and not specific to the project. Therefore, they are not listed below. However, policies, goals, and implementation measures in the *Kern County General Plan* that are applicable to the project are incorporated by reference.

Chapter 1. Land Use, Open Space and Conservation Element

1.10 General Provisions

1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation

Policies

- **Policy 25.** The County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to residents and visitors.

Implementation Measures

- **Implementation Measure K.** Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.
- **Implementation Measure L.** The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.

- **Implementation Measure N.** The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.
- **Implementation Measure O.** On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.

4.16.4 Impacts and Mitigation Measures

Methodology

The proposed project's potential to impact tribal cultural resources is evaluated using several resources, including the results of AB 52 notification letters sent to Native American groups and individuals (see **Section 4.16.1** of this EIR), and information regarding cultural resources as discussed in **Section 4.5, *Cultural Resources***, of this EIR. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect related to tribal cultural resources.

A project would have a significant impact on tribal cultural resources if it would:

- a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources defined in Public Resources Code Section 5020.1 (k); or
 - ii. A resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe.

Project Impacts

Impact 4.16-1a: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe that is listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k).

Kern County sent tribal consultation letters for the proposed project to the following recipients pursuant to AB 52 in October 2021:

- Tejon Indian Tribe (Attn: Candice Garza)
- Torres Martinez Desert Cahuilla Indians (Attn: Michael Mirelez, Cultural Resources Coordinator)
- Twenty-Nine Palms Band of Mission Indians (Attn: Anthony Madrigal Jr., Tribal Grants Administrator)
- Twenty-Nine Palms Band of Mission Indians (Attn: Darrell Mike, Tribal Chairman)
- Yuhaaviatam of San Manuel Nation (Attn: Alexandra McCleary, Ph.D.).

On July 15, 2024, Eunice Ambriz replied to Kern County via email to Randall Cates on behalf of Yuhaaviatam of San Manuel Nation expressing appreciation for the opportunity to review project documentation and advising that the project is located outside of the Serrano ancestral territory and that the Yuhaaviatam of San Manuel Nation would not be requesting consultation party status or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates.

Kern County received no responses from Native American groups to the AB 52 consultation letters requesting consultation.

No tribal cultural resources or potential tribal cultural resources have been identified within the project site through consultation with Native American representatives and as a result of archaeological studies prepared for the project. Nonetheless, implementation of Mitigation Measures **MM 4.5-1** through **4.5-3**, presented in **Section 4.5, *Cultural Resources***, are proposed address the potential for encountering tribal cultural resources

The Lead Agency notes that Section 21080.3.2(a) of AB 52 reads as follows:

As a part of the consultation pursuant to Section 21080.3.1, the parties may propose mitigation measures, including, but not limited to, those recommended in Section 21084.3, capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource. If the California Native American tribe requests consultation regarding

alternatives to the project, recommended mitigation measures, or significant effects, the consultation shall include those topics. The consultation may include discussion concerning the type of environmental review necessary, the significance of tribal cultural resources, the significance of the project's impacts on the tribal cultural resources, and, if necessary, project alternatives or the appropriate measures for preservation or mitigation that the California Native American tribe may recommend to the Lead Agency.

Pursuant to Section 21080.3.2(b)(1) of AB 52, the Lead Agency's consultation obligations are satisfied sufficient for circulation of the draft EIR, and the Lead Agency is proposing inclusion of Mitigation Measures **MM 4.5-1** through **MM 4.5-3**, which require cultural resources sensitivity training for site workers, cessation of ground disturbance and implementation of treatment measures in the event that archaeological or historical resources are encountered during ground-disturbing activities, and cessation of work and consultation with the Native American Heritage Commission and Most Likely Descendent in the event of discovery of human remains if the County Coroner determines that the remains are Native American. Mitigation Measures **MM 4.5-1** through **MM 4.5-3** would mitigate or avoid a significant effect, if a significant effect were found to exist, on tribal cultural resource(s).

However, the Lead Agency notes that that Section 21080.3.2 (c) of AB52 states as follows:

- 1) This Section does not limit the ability of a California Native American tribe or the public to submit information to the Lead Agency regarding the significance of the tribal cultural resources, the significance of the project's impact on tribal cultural resources, or any appropriate measures to mitigate the impact.
- 2) This Section does not limit the ability of the Lead Agency or project proponent to incorporate changes and additions to the project as a result of the consultation, even if not legally required.

Mitigation Measures

Implement Mitigation Measures **MM 4.5-1** through **MM 4.5-3**.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.5-1** through **MM 4.5-3**, impacts would be less than significant.

Impact 4.16-1b: The project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe that is a resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe.

As discussed previously, no tribal cultural resources were identified within the project site through consultation with Native American representatives; however, tribal cultural resources could still be encountered during ground-disturbing project activities. Implementation of Mitigation Measures MM 4.5-1 through MM 4.5-3 would reduce impacts to a less than significant level.

Mitigation Measures

Implement Mitigation Measures MM 4.5-1 through MM 4.5-3.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.5-1 through MM 4.5-3, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

An analysis of cumulative impacts takes into consideration the entirety of impacts that the projects discussed in **Chapter 3, *Project Description***, and as shown in **Table 3-15, *Cumulative Project List***, would have on tribal cultural resources. The geographic scope for cumulative impacts to cultural resources includes all eastern Kern County (i.e. within the same Air District as the proposed project (Mojave Desert Air Basin)). Kern County records were also reviewed to determine if there were any mining/reclamation-related projects (“like projects”) within the Mojave Desert Air Basin for which application(s) were received by Kern County in the previous three years (i.e., July 16, 2021, through July 16, 2024), however, no such application(s) were received by Kern County. Analysis of cumulative impacts considers the entirety of impacts that the projects discussed in **Section 3.7, *Cumulative Effects Overview***, would have on tribal cultural resources. This geographic scope of analysis is appropriate because the archaeological and historical resources within the Mojave Desert Air Basin are expected to be similar to those in the project site because their proximity, similar environments, landforms, and hydrology would result in similar land use and, thus, site types.

Impact 4.16-2: The proposed project would contribute to cumulative tribal cultural resources impacts.

Cumulative development within eastern Kern County has the potential to result in cumulative impacts to tribal cultural resources, if present. As discussed previously, no tribal cultural resources within the project site have been identified through consultation with Native American representatives or archaeological study. Implementation of Mitigation Measures **MM 4.5-1** through **MM 4.5-3** would minimize the potential for the proposed project to result in impacts to unknown tribal cultural resources if discovered during project activities. Implementation of the proposed project would not result in off-site impacts to tribal cultural resources, and it is expected that other development projects within eastern Kern County would be required to mitigate for their individual impacts to tribal cultural resources. Consequently, the incremental effects of the project, after mitigation, would not have the potential to make a considerable contribution, in combination with impacts from past, present, or reasonably foreseeable projects to a cumulative significant impact on cultural resources under CEQA. As a result of these factors and with implementation of Mitigation Measures **MM 4.5-1** through **MM 4.5-3**, the project would not have the potential to substantially contribute to cumulative impacts to tribal cultural resources.

Mitigation Measures

Implement Mitigation Measures **MM 4.5-1** through **MM 4.5-3**.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.5-1** through **MM 4.5-3**, cumulative impacts would be less than significant.

Section 4.17
Utilities and Service Systems

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Section 4.17

Utilities and Service Systems

4.17.1 Introduction

This section of the Environmental Impact Report (EIR) addresses the project's potential impacts on certain utilities and services: water, electricity, natural gas, solid waste, wastewater, and stormwater. This section also provides the environmental and regulatory settings and discusses mitigation measures to reduce impacts where applicable. The analysis in this section is partially based on information provided in the following documents, and incorporated by reference herein:

- *Water Supply Assessment - Mojave Life of Mine Reclamation Plan Amendment Project* prepared by Sespe Consulting, Inc., dated June 2025; included as **Appendix I.1** (Sespe Consulting 2025a);
- *Estimated Reclamation Water Use for the CalPortland Mojave Life of Mine Reclamation Plan Amendment Project*, prepared by Sespe Consulting, Inc., dated October 7, 2025; included as **Appendix I.2** (Sespe Consulting 2025h); and
- *Drainage Report for CalPortland Company Mojave Quarry* prepared by Sespe Consulting, Inc., dated August 2025; included as **Appendix I.5** (Sespe 2025g).

4.17.2 Environmental Setting

The following section describes the existing conditions on the project site and surrounding area as relevant to utilities and service systems.

Water

Throughout Kern County, three sources of water are available: natural, manmade, and reclaimed. Natural sources include rivers, lakes, streams, and groundwater stored in aquifers. Manmade sources include runoff that has been treated and stored in reservoirs or other manmade catchment structures. Reclaimed water is wastewater that has been conveyed to a treatment plant and then treated to a degree that makes it suitable for specific uses, such as irrigation. Reclaimed water is not potable (drinkable) and must be conveyed in a separate system to ensure no possibility of direct human consumption. Potable water is used for drinking, washing, flushing, recreational purposes, and other domestic uses. The ability to supply water is a function of both available sources and conveyance capacity. Sources of water supply available in Kern County are described below.

State Water Project

The State Water Project (SWP) is the nation's largest State-built, multi-purpose water project, and serves as California's principal water storage and delivery system. Authorized by the legislature in 1959, the SWP includes a system of 28 dams and reservoirs, 660 miles of

aqueducts, and 26 pumping and generating plants. The SWP includes 20 major reservoirs that can hold 5.8 million acre-feet (AF), with annual deliveries averaging up to 3 million AF.

The SWP, which is maintained and operated by the California Department of Water Resources (DWR), is utilized to store water and distribute it to 29 urban and agricultural water suppliers in northern California, the San Francisco Bay Area, the San Joaquin Valley, the Central Coast, and southern California. In the early 1960s, DWR began entering into individual SWP Water Supply Contracts with urban and agricultural water supply agencies located throughout northern, central, and southern California for SWP water supplies. The SWP provides supplemental water to 27 million Californians and 750,000 acres of farmland (DWR 2022). Of the contracted water supply, about 66% is delivered to residential, municipal, and industrial uses and 34% is delivered to agricultural uses.

Kern County Water Agency

The Kern County Water Agency (KCWA) is one of 29 water agencies (commonly referred to as “contractors”) that have a SWP Water Supply Contract with DWR. Each SWP contractor’s SWP Water Supply Contract includes a “Table A,” which lists the maximum amount of water an agency may request each year throughout the life of the contract. Table A is used to determine each contractor’s proportionate share, or “allocation,” of the total SWP water supply DWR determines to be available each year. The KCWA’s current annual Table A amount is 982,730 acre-feet per year (AFY) (DWR 2018).

While Table A identifies the maximum annual amount of water an SWP contractor may request, the amount of SWP water actually available and allocated to the KCWA varies from year to year. The factors affecting SWP deliveries are discussed in detail in the *State Water Project Draft Delivery Capability Report* (DWR 2018), which was subsequently finalized in March 2018, and includes hydrology, the amount of water in reservoirs at the beginning of the year, regulatory and operational constraints, and the total amount of water requested by DWR contractors. In the Capability Report, DWR recommends analyses for SWP contractors to use in water supply planning.

Water Supply

The proposed project would approve an amended reclamation plan that would cover approximately 4,367 acres approximately 6 miles southeast of the City of Tehachapi and 7.25 miles west of the unincorporated community of Mojave. The project water supply is proposed to be provided from groundwater wells, and would not connect with or utilize water supply from a public water system. As discussed further below, one of the groundwater supply wells for the existing operation (Well 5 and Well 6) is part of a permitted public water system that serves potable water to the existing operation but is not used for mining or reclamation and is not considered a supply source for the project (Sespe Consulting 2025a).

Groundwater Supply

Most of the project area lies outside of DWR Bulletin 118 groundwater basins. However, a portion of the Fremont Valley Groundwater Basin extends to the west of the current east mining pit and plant site and a portion of the Antelope Valley Groundwater Basin overlaps with part of the project area south and west of the plant site. Both groundwater basins are within the

South Lahontan Hydrologic Region (Sespe Consulting 2025a), which encompasses portions of the western Mojave Desert characterized by internally drained basins and limited surface water inflow from surrounding mountains. Additional detail regarding the hydrologic characteristics, priority ranking, and adjudication status of these basins is provided in the following subsections.

Antelope Valley Groundwater Basin

The project area lies within the northwestern margin of the Antelope Valley Groundwater Basin, an adjudicated basin that extends over the western Mojave Desert Region. According to the current Sustainable Groundwater Management Act (SGMA) Data Viewer portal, the basin is ranked as a very low priority basin (Sespe Consulting 2025a).

The Antelope Valley Groundwater Basin covers approximately 1.01 million surface acres and underlies an extensive alluvial valley in the western Mojave Desert. The basin is bounded on the east by ridges, buttes, and low hills that form a surface and groundwater drainage divide and on the north by Fremont Valley Groundwater Basin (discussed below) at a groundwater divide approximated by a southeastward-trending line from the mouth of Oak Creek through Middle Butte to exposed bedrock near Mojave Mine, and by the Rand Mountains farther east. Elevations of the alluvial valley range from about 2,300- to 3,500-feet amsl. The basin is bounded by the Garlock fault zone and the Tehachapi Mountains to the northwest, and the San Andreas Fault zone and the San Gabriel Mountains to the southwest. In addition to the Garlock and San Andreas Fault zones, numerous other faults within the basin impede groundwater flow (Bloyd 1967) (Durbin 1978) (Carlson, Leighton, Phillips, & Metzger 1998). Bloyd (1967) described eight groundwater subunits in this basin bounded, in part, by faults that displace the water table. The Randsburg-Mojave, Cottonwood, Willow Springs, Rosamond, and Neenach faults displace the water table in the western part of the basin (Bloyd, 1967) (Dibblee 1963) (Durbin 1978) (Landquist, Rewis, Galloway, & McCaffrey 1993), as does an unnamed fault in the southwestern part of the basin (Bloyd 1967) (Sespe Consulting 2025a).

Two primary aquifers are recognized within the vicinity of the project site: the upper or principal aquifer, and the lower or deep aquifer (DWR 2015). The principal aquifer is unconfined and generally thickest in the southern portion of the valley. The deep aquifer is confined and thickest near the dry lakes in the northeastern portion of the valley (DWR 2003). The primary water-bearing materials consist of Pleistocene- to Holocene-age alluvial deposits, floodplain deposits, and lacustrine deposits that contain coarse gravels near the mountain fronts and become finer-grained toward the central portion of the valley (DWR 2015). Annual rainfall typically ranges from 5 to 10 inches (Sespe Consulting 2025a).

Based on the work of DWR (2015), recharge to the principal aquifer occurs by percolation of perennial streamflow into the alluvial fans at the base of the surrounding mountains. In addition to natural recharge, the principal aquifer is artificially recharged through placing water into aquifer storage and recovery wells (DWR 2015). The Big Rock and Little Rock Creeks, in the southern part of the basin, contribute about 80 percent of runoff into the basin (Durbin 1978). Additionally, irrigation from agriculture and possible leakage from canals may also contribute to recharge. The total storage capacity has been reported at 68 to 70 million acre-feet (DWR 1975) (Planert & Williams 1995) (Sespe Consulting 2025a).

From 1975 through 1998, groundwater level changes ranged from an increase of 84 feet to a decrease of 66 feet (Carlson, Leighton, Phillips, & Metzger 1998). The parts of the basin with declining water levels are along the Highway 14 corridor from Palmdale through Lancaster to Rosamond and surrounding Rogers Lake on Edwards Air Force Base (Carlson, Leighton, Phillips, & Metzger 1998). Historically, groundwater in the basin flowed north from the San Gabriel Mountains and south and east from the Tehachapi Mountains toward Rosamond Lake, Rogers Lake, and Buckhorn Lake. These dry lakes are places where groundwater can discharge by evaporation. Because of recent groundwater pumping, groundwater levels and flow have been altered in urban areas such as Lancaster and Edwards Air Force Base. Groundwater pumping has caused subsidence of the ground surface as well as earth fissures to appear in Lancaster and on Edwards Air Force Base. By 1992, 292 square miles of Antelope Valley had subsided more than one (1) foot. This subsidence has permanently reduced aquifer-system storage by about 50,000 acre-feet (Sneed and Galloway 2000) (Sespe Consulting 2025a).

The Antelope Valley Groundwater Basin is an adjudicated basin that has been determined to be in a condition of overdraft, where groundwater withdrawals exceed the defined total safe yield established by the Los Angeles County Superior Court in 2011. The court identified a basin-wide safe yield of 110,000 acre-feet per year. This yield equates to a maximum sustainable withdrawal of 0.18 acre-feet per acre per year when applied across the approximately 600,000-acre adjudicated portion of the basin. However, the adjudication Judgement and the 2023 Antelope Valley Groundwater Basin Watermaster Annual Report, state a native safe yield for AVGB of 82,300 acre-feet per year, which excludes consideration of imported water return flows. Based on the native safe yield, this equates to 0.14 acre-feet per acre per year when applied across the 600,000-acre adjudicated portion of the basin (Sespe Consulting 2025a).

Fremont Valley Groundwater Basin

The Fremont Valley Groundwater Basin underlies about 335,000 acres in Fremont Valley, which is adjacent to the north of Antelope Valley. It is ranked as a low priority basin, based on the current listing in the SGMA Data Viewer portal. The basin is bounded on the northwest by the Garlock fault zone against impermeable crystalline rocks of the El Paso Mountains and the Sierra Nevada. This basin is bounded on the east by crystalline rocks of the Summit Range, Red Mountain, Lava Mountains, Rand Mountains, Castle Butte, Bissel Hills, and Rosamond Hills. The basin is bounded on the southwest by the Antelope Valley Groundwater Basin along a groundwater divide approximated by a line connecting the mouth of Oak Creek through Middle Butte to exposed basement rock near Gem Hill (Sespe Consulting 2025a).

Average annual rainfall in the Fremont Valley ranges from 4 to 12 inches. Surface water in Fremont Valley drains toward Koehn (dry) Lake; however, surface drainage overlying the southwestern-most part of the basin is southward toward the town of Rosamond.

Both Quaternary alluvium and lacustrine deposits are water-bearing; however, the alluvium is the most important water-bearing material in the basin (DWR 1969). The alluvium is about 1,190 feet thick (Bader 1969, DWR 1964) along the margin of the basin and thins toward the middle of the basin, where it is interbedded with thick layers of lacustrine silt and clay near Koehn Lake. Groundwater in the alluvium is generally unconfined, although locally confined

conditions occur near Koehn Lake (DWR 1964). Average well yield is about 530 gallons per minute (gpm) with a maximum yield of 2,580 gpm (DWR 1975) (Sespe Consulting 2025a).

The Garlock and El Paso fault zones, which extend along the foothills of the Sierra Nevada and El Paso Mountains, form restrictive groundwater barriers on the west and northwest sides of the basin (Dibblee 1967). The Cantil Valley fault traverses the northeast part of the basin, but its effect on groundwater is not known. The Muroc fault traverses the central part of the basin and forms a partial barrier to groundwater flow with recent studies showing distinct groundwater elevations north and south of the fault (Woodward & Curran 2018) (DWR 1964) (Sespe Consulting 2025a).

Natural recharge of the basin includes percolation of ephemeral streams that flow from the Sierra Nevada. The general groundwater flow direction is toward Koehn Lake at the center of the valley (Bader 1969, DWR 1964). There is no appreciable quantity of groundwater flowing out of the basin (Bader 1969). In the southwestern part of the basin, groundwater flows from near Oak Creek northward toward the town of Mojave and continues under the surface drainage divide toward Koehn Lake. Elsewhere in the Fremont Valley Groundwater Basin, groundwater flows toward Koehn Lake. A simple, spreadsheet-based groundwater balance model estimates 13,800 acre-feet per year of groundwater recharge (Woodward & Curran 2018). The total storage capacity of the basin is calculated to be 4,800,000 acre-feet (DWR 1975) (Sespe Consulting 2025a).

Project Area Groundwater Conditions, Supply, and Consumption

Because the project area is located at the Tehachapi Mountain-alluvial basin transition, groundwater conditions are likely to be variable. Within the crystalline rock underlying much of the site, groundwater is expected to move principally through fracture flow. In contrast, in the alluvial aquifer immediately to the east, homogenous groundwater conditions are likely predominant. Although groundwater depths and flow directions are typically controlled by fracture orientation, void space, interconnectivity and other factors, and thus can differ significantly both spatially and at depth, groundwater in the alluvial basin generally flows southeasterly (Duell 1987). The *Updated Hydrogeological Report for CalPortland Company Mojave Plant* prepared by Ken Schmidt and Associates (Schmidt 2009) determined that groundwater flow moves southeasterly on the west side of the plant site and more easterly to the east of the plant (Sespe Consulting 2025a).

Groundwater wells in the vicinity of the project span the boundaries of the Fremont Valley Groundwater Basin and Antelope Valley Groundwater Basin. Potable Water Wells 5 and 6, Solar Well B-9, and Solar Well B-2 are situated along the margin of the southwestern boundary of the Fremont Valley Groundwater Basin. The Big Meadow Well is also situated within the southwestern region of the Fremont Valley Groundwater Basin near Oak Creek and the Garlock Fault. Based on the well completion reports (provided in Appendix B of Sespe 2025a), these five (5) wells in the Fremont Valley Groundwater Basin are completed in alluvium.

Groundwater elevations were measured at a subset of the wells located in the Antelope Valley Groundwater Basin on October 1, 2024, by Sespe Consulting. Depth-to-water measurements were 26.8 feet below top of casing (TOC) (3,841 feet amsl) at Potable Well 5, 9.75 feet below TOC (3,714 feet amsl) at Potable Well 6, and 2.7 feet below TOC at Solar Well B-9. As

discussed above, Wells 5 and 6 are part of a permitted public water supply system and do not supply water for existing operations.

Quarry Well R4-WE1 and Quarry Well R4-WE2 are situated at the northwestern boundary of the Antelope Valley Groundwater Basin. While the Antelope Valley Groundwater Basin is characterized as an alluvial aquifer (DWR 2004), the well completion reports for the Quarry Well R4-WE1 and Quarry Well R4-WE2 indicate that the wells are completed in fractured bedrock, where groundwater conditions are controlled by fracture density and orientation, void space, interconnectivity and other factors. As such, the Quarry Well R4-WE1 and Quarry Well R4-WE2 are not considered part of the Antelope Valley Groundwater Basin's managed alluvial water bearing system (Sespe Consulting 2025a).

Table 4.17-1 Water Supply Well Summary

Well Name (Basin)	Ground Surface Elev. ¹ (ft amsl)	Total Drill Depth (ft)	Screen Interval (ft)	Static Water Elev. ² (ft amsl)	1 st Water ³ (ft bgs)	Max. Pump Capacity (gpm)	Annual Production (ac ft)
Potable Well 6 (FVGB)	3,874	64	20-64	3,854	25	45	13
Potable Well 5 (FVGB)	3,890	84	30-60	3,855	40	--	Backup
R4-WE1 ⁴ (AVGB-Bedrock)	3,654	442	180-440	3,542	112	100	45.6
R4-WE2 ⁴ (AVGB-Bedrock)	3,654	162	62-162	3,361	23	23	61.3
Solar Well B2 (FVGB)	4,462	86.5	46 - 87	4,462	45	45	23.8
Solar Well B9 (FVGB)	4,431	97	61-91	--	--	--	29.1
Big Meadow 5 (FVGB)	4,942	200	80-170	4,942	180	180	52.3

Source: Sespe Consulting 2025a.

Notes:

1. Ground surface elevations for each well were estimated using USGS 1/3 arc-second digital elevation models (DEM) and may not reflect surveyed site-specific benchmarks.
2. Static water elevations were calculated by subtracting reported depth to groundwater (in feet below ground surface) from the estimated ground surface elevation (in feet above mean sea level). These values are considered approximate due to variability in DEM resolution, well casing installation depths, and lack of consistent datum references in historical well completion reports.
3. 1st Water reflects reported depth to water below ground surface at the time of well completion.
4. Quarry Wells collars are located in Antelope Valley Groundwater Basin but screened in bedrock not alluvium.

The existing Mojave Mine operations currently source water for mining, reclamation and cement production from five (5) of the seven (7) existing groundwater wells presented in **Table 4.17-1**, above. Of these, Quarry Wells R4-WE1 and R4-WE2 are located within the project property boundary. Potable Wells 5 and 6 are located within or directly adjacent to the property boundary and serve the cement plant as part of the site's permitted public water system, with Potable Well 5 maintained as a backup source. The remaining three (3) wells, Big Meadow 5,

Solar Well B2, and Solar Well B9, are situated nearby but outside the property boundary and are currently used to support mining and reclamation activities (Sespe Consulting 2025a).

The current demand, or baseline consumptive use, supplied by five (5) of the seven (7) existing wells that supports both extraction and processing, as well as handling of overburden and process waste materials placed and/or stockpiled for site reclamation. Based on well production records for the period October 2019 through September 2024 (corresponding to the 2020-2024 water years), Sespe Consulting (2025a) determined the average annual groundwater production from all existing wells to be approximately 225.1 acre-feet. Of this quantity, approximately 77 acre-feet per year is attributed to quarrying activities (including dust suppression), while the remaining 148.1 acre-feet supports cement plant operations, including potable water sourced through the public water system (Sespe Consulting 2025a).

Electricity

Electrical service is available in the project region from Southern California Edison (SCE). Project reclamation activities are not anticipated to require the use of additional electricity beyond the baseline consumptive use associated with vested mining and processing operations (Sespe Consulting 2025d, Sespe Consulting 2023).

Natural Gas

PG&E and the Southern California Gas Company (SoCalGas), a subsidiary of Sempra Energy, are the natural gas providers in Kern County. Project reclamation activities are not anticipated to require the use of natural gas (Sespe Consulting 2025d, Sespe Consulting 2023).

Wastewater

Existing operations utilize a combination of plumbed restroom facilities with septic system(s), and portable toilets and handwashing or sanitization facilities. Wastewater treatment service is not proposed and continued operations would continue to use those facilities and no additional septic systems are proposed. Portable toilets utilize secondary containment (i.e., tray) and are regularly serviced by a local contractor which transports the waste by truck to facilities authorized to dispose of such waste. These practices would continue under vested mining operations and project reclamation.

Solid Waste

The *Kern County and Incorporated Cities Integrated Waste Management Plan* (Kern County 1991) addresses issues pertaining to nonhazardous waste disposal and other waste facilities. The Waste Management Plan identifies issues, goals, policies, regulations, and enforcement, as well as the transfer, storage, and disposal of solid waste.

Kern County is served by seven Class III landfills: Metropolitan Bakersfield (Bena Landfill), Boron, Mojave-Rosamond, Ridgecrest, Shafter-Wasco, Taft, and Tehachapi. These facilities accept nonhazardous solid waste only. Two landfills nearest to the project site, both within approximately 15 miles driving distance, are the Tehachapi Sanitary Landfill and the Mojave-Rosamond Recycling and Sanitary Landfill. The Tehachapi Sanitary Landfill is located at 12001 Tehachapi Boulevard, Tehachapi, and is a Class III landfill that accepts dead animals,

industrial, construction/demolition, and mixed municipal wastes (CalRecycle 2025a). California Department of Resources Recycling and Recovery (CalRecycle) records indicate the facility has a remaining capacity of 177,577 cubic yards with a projected end of capacity by 2031. The Mojave-Rosamond Recycling and Sanitary Landfill is located at 400 Silver Queen Road, Mojave, and is a Class III landfill that accepts industrial, mixed municipal, construction and demolition, and agricultural wastes. The landfill has a remaining capacity of 70,028,492 cubic yards out of a total maximum capacity of 78,000,000 cubic yards and has an estimated closure date of 2132 (CalRecycle 2025b).

Stormwater

The project is located adjacent to the foothills of the Tehachapi Mountains, along the western edge of the arid Mojave Desert. The project site is located within the Willow Springs Hydrologic Area of the Antelope Hydrologic Unit. Typical patterns of precipitation are winter rains and summer thunderstorms, which tend to be of short duration and high intensity (Sespe Consulting 2025g).

The project area has no perennial streams or bodies of water; just seasonal/intermittent drainages. Major drainage in the project area is primarily to the southeast to the Oak Creek drainage. An unnamed wash crosses the central portion of the project area, running subparallel to Tehachapi-Willow Springs Road and flowing to the southeast (Sespe Consulting 2025g).

Runoff on the northernmost side of the project area is via a series of gullies or channels, which direct surface flows to Oak Creek channel that runs adjacent to the northern border of the site, along Oak Creek Road. Oak Creek is an intermittent stream with a drainage course that flows around the north and easternmost sides of the project area then southeast towards the Antelope Valley. Runoff from the eastern half of the project area generally flows south and east; ephemeral drainages direct flows to Oak Creek, east of the site. Runoff from the majority of the western half of the project area flows south and east to an unnamed ephemeral channel that runs adjacent to Tehachapi Willow Springs Road. The confluence of the unnamed channel and Oak Creek is approximately 5 miles southeast of the project site (Sespe Consulting 2025g).

Stormwater runoff is discussed in more detail in **Section 4.7, *Geology and Soils***, and **Section 4.10, *Hydrology and Water Quality***, of this EIR.

4.17.3 Regulatory Setting

Federal

National Pollution Discharge Elimination System Permit

Discharge of treated wastewater to surface waters of the United States, including wetlands, requires a National Pollutant Discharge Elimination System (NPDES) permit. In California, the Regional Water Quality Control Boards (RWQCBs) administer the issuance of these federal permits. Obtaining an NPDES permit requires preparation of detailed information, including characterization of wastewater sources, treatment processes, and effluent quality.

During ongoing mining operations throughout the life of the mine, storm water controls and best management practices (BMPs) for controlling stormwater runoff will be implemented as

described in the site-specific Storm Water Pollution Prevention Plan (SWPPP) (Sespe Consulting 2025g). Additional information on the project's NPDES permitting requirements, as well as SWPPP requirements, is presented in **Section 4.10, Hydrology and Water Quality**, of this EIR.

State

California Energy Commission

The California Energy Commission (CEC) regulates the provision of natural gas and electricity within the State. The CEC is the State's primary energy policy and planning agency. Created in 1974, the CEC has five major responsibilities: forecasting future energy needs and keeping historical energy data, licensing thermal power plants 50 megawatts (MW) or larger, promoting energy efficiency through appliance and building standards, developing energy technologies and supporting renewable energy, and planning for and directing the State response to energy emergencies.

California Department of Resources Recycling and Recovery

CalRecycle, formerly the California Integrated Waste Management Board (CIWMB), is the State agency designated to oversee, manage, and track California's 76 million tons of waste generated each year. It is one of the six agencies under the umbrella of the California Environmental Protection Agency (CalEPA). CalRecycle develops regulations to control and manage waste, for which enforcement authority is typically delegated to the local government. CalRecycle works jointly with local government to implement regulations and fund programs.

The Integrated Waste Management Act of 1989 (Public Resources Code [PRC] 40050 et seq. or Assembly Bill [AB] 939, codified in PRC 40000), administered by CalRecycle, requires all County and local governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25% by the year 1995 and 50% by the year 2000. To assist local jurisdictions in achieving these targets, the California Solid Waste Reuse and Recycling Access Act of 1991 requires all new developments to include adequate, accessible, and convenient areas for collecting and loading recyclable and green waste materials.

Lahontan Regional Water Quality Control Board

The primary responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and nine RWQCBs, collectively referred to as the California Water Board. The SWRCB sets Statewide policy for the implementation of Federal and State laws and regulations. The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans), which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The project is within the jurisdiction of the Lahontan RWQCB, which is responsible for the implementation of Federal and State water quality protection statutes, regulations, and guidelines.

California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California.

California Department of Water Resources

The DWR is a department within the California Resources Agency. The DWR is responsible for the State of California's management and regulation of water usage.

Senate Bill 610

Senate Bill (SB) 610 was passed on January 1, 2002, amending California law to require detailed analysis of water supply availability for large development projects. An SB 610 Water Supply Assessment (WSA) must be prepared if the following three conditions are met:

1. The project is subject to the California Environmental Quality Act (CEQA) under California Water Code (CWC) Section 10910;
2. The project meets criteria to be defined as a “Project” under CWC Section 10912; and
3. The applicable water agency’s current Urban Water Management Plan (UWMP) does not account for the water supply demand associated with the project.

A project would meet the definition of “Project” per CWC Section 10912 if it is:

- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.

The projected water supply may be determined to be sufficient or insufficient for the proposed project, per CWC Section 10910, through evaluation of the following:

- If the projected water demand associated with the proposed project was not accounted for in the most recently adopted UWMP, or the public water system has no UWMP, the water assessment for the project shall include a discussion with regard to whether the public water system’s total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system’s existing and planned future uses, including agricultural and manufacturing uses.

California Solid Waste Reuse Recycling Access Act

The California Solid Waste Reuse and Recycling Access Act of 1991 (California PRC Chapter 18) addressed the State’s lack of adequate areas for collecting and loading recyclable materials, which resulted in a significant impediment to diverting solid waste from landfills. The act required State and local agencies to tackle issues related to access to solid waste collecting and loading areas to promote source reduction, recycling, and composting programs. It also

required local agencies to adopt ordinances pertaining to the provision of areas for collecting and loading recyclable materials from development projects.

Local

Kern County General Plan

The project site is located within the *Kern County General Plan* and the *Cameron Canyon Specific Plan*. The goals, policies, and implementation measures in the *Kern County General Plan* and the *Cameron Canyon Specific Plan* for utilities applicable to the project are provided below.

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

1.4 Public Facilities and Services

Policies

- **Policy 1.** New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.
- **Policy 3.** Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.
- **Policy 13.** The County shall ensure landfill capacity for the residents and industry of Kern County.

Implementation Measures

- **Implementation Measure C.** Project developers shall coordinate with the local utility service providers to supply adequate public utility services.
- **Implementation Measure D.** Involve utility providers in the land use and zoning review process.

1.10 General Provisions

Goals

- **Goal 1.** Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

1.10.1 Public Services and Facilities

Policies

- **Policy 9.** New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure which it generates and upon which it is dependent.
- **Policy 12.** All methods of sewage disposal and water supply shall meet the requirements of the Kern County Public Health Services Department and the California Regional Water Quality Control Board. The County's Public Health Services Department shall periodically review and modify, as necessary, its requirements for sewage disposal and water supply, and shall comply with any new standards adopted

by the State for implementation of Government Code Division 7 of the Water Code, Chapter 4.5 (Section 13290-13291.70 (Assembly Bill 885) (2000).

- **Policy 15.** Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act (CEQA) documents, staff analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.
- **Policy 16.** The developer shall assume full responsibility for costs incurred in service extension or improvements that are required to ensure the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.

Cameron Canyon Specific Plan

Section II. Public Facilities

Goals

- **Goal.** To provide adequate levels of public service to the Cameron Canyon area.

Policies

- **Policy 2.** New development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development, as well as ongoing operating and maintenance costs. Infrastructure costs will be estimated on a dwelling unit equivalency basis and levied at the time of approval of the final map. Infrastructure includes roads, drainage, erosion control, sewage disposal, and water systems.

4.17.4 Impacts and Mitigation Measures

Methodology

Potential impacts associated with the project's reclamation activities were developed based on analysis of existing setting, consultation with Kern County, analysis presented in project-specific technical studies as cited herein, and review of the project design. The discussion below describes project-specific impacts and provides measures that would be incorporated to mitigate and reduce potential impacts to the extent feasible.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect related to utilities and service systems. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to utilities and service systems if it would:

- a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or

telecommunications facilities, the construction or relocation of which could cause significant environmental effects;

- b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- e. Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.

Project Impacts

Impact 4.17-1: The project would require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Water

The source of water for the project will be groundwater extracted from five (5) of the seven (7) existing wells, summarized above in **Table 4.17-1, *Water Supply Well Summary***, above. These existing water supply wells have been in service for many years, with well construction dates ranging from 1954 to 2013. CalPortland provided Sespe with monthly metered groundwater production and consumption data for the period January 2019 through December 2024. The dataset includes well-specific production volumes and categorized site-wide consumption values (e.g., process water, potable water, batch plant use, and water truck distribution). Based on this dataset, Sespe calculated that the average annual groundwater production across all existing operational wells is approximately 225.1 acre-feet. Excluding production from Potable Wells 5 and 6, which supply potable water and are not used for mining or reclamation (Well 5 serves as a backup to Well 6), the remaining five (5) wells yielded an average of approximately 212.1 acre-feet to support mining and reclamation during that same period (Sespe Consulting 2025a).

Of five (5) wells, Big Meadow 5, Solar Well B2 and Solar Well B9 are located within the Fremont Valley Groundwater Basin and are completed in Quaternary-age alluvial deposits, which constitute the primary water-bearing materials of the basin. Quarry Well R4-WE1 and Quarry Well R4-WE2 lie within the mapped boundary of the Antelope Valley Groundwater Basin but are screened entirely within fractured crystal line bedrock and do not draw from the basin's alluvial aquifer (Sespe Consulting 2025a).

Once vested mining and processing is complete, which includes placement of overburden in stockpiles and into mine pits E and F, final grading/contouring and placement of topsoil

associated with project reclamation would begin, followed by revegetation of the mined land surfaces. During the course of these activities, water will be used for dust control. Presently, the Mojave Mine uses approximately 77 acre-feet of water each year for dust control, which is applied to control fugitive dust associated with placement of overburden, controlling fugitive emissions from haul and access roads and working quarry faces. Since the vested operations include handling and placement of overburden into stockpiles and into mine pits E and F as part of mining operations, water use for dust control associated with reclamation would only be required for final surface recontouring following completion of mining. Project revegetation will rely on natural rainfall and passive seeding methods rather than supplemental irrigation. Accordingly, the project's reclamation water demand constitutes the quantity of water necessary to complete these reclamation activities. Therefore, while placement of the overburden will have been completed, as well as quarrying activities, dust control water for reclamation would be limited to final grading and re-soiling activities, which would be significantly less than the current 77 acre-feet annual water demand for dust control. However, to be conservative, the Water Supply Assessment prepared for the project (Sespe Consulting 2025a) assumes the project would continue to require the full 77 acre-feet of water for dust suppression during reclamation. Accordingly, using this conservative assumption, the forecasted water demand for the project of 77 acre-feet is about 66 percent less than the estimated baseline annual water demand of 225.1 acre-feet for the Mojave Mine (Sespe Consulting 2025a).

Sespe evaluated water supply sufficiency for the project considering only the water available from the five (5) existing groundwater wells that supply water for mining and reclamation. The analysis is conservative in that Sespe assumes groundwater is the only assured water supply source. In considering the 20-year project demand period, Sespe Consulting (2025a) referred to the estimated normal, single and multiple year dry period available groundwater quantities determined in the Water Supply Assessment for the Mojave Mine Life Extension Project prepared by Provost & Pritchard Consulting Group (2018), which estimated 597 acre-feet under normal conditions and an estimated 320 acre-feet during single and multiple dry years. Sespe (2025a) utilized dry period estimates of available water supply based on the three (3) driest years on record for the local aquifer (1972 through 1974) according to the Provost & Pritchard Consulting Group (2018) study. By comparison with the available water supply under normal, single and multiple dry years, the analysis found that even with an increase of 3.3 acre-feet of water demand during dry years, the available water supply is sufficient to serve the project. Under normal water years the annual water supply available from the groundwater wells (597 acre-feet) is more than sufficient to meet the annual project demand (77 acre-feet), and also during single and multiple dry years (320 acre-feet annual supply in comparison to 80.3 acre-feet demand). Specifically, Provost & Pritchard Consulting Group (2018) defined normal conditions based on the long-term average well production data, while single and multiple dry year conditions were derived from recorded groundwater availability during the driest three-year period on record (1972-1974), which Provost & Pritchard Consulting Group (2018) identified as representative of drought conditions for the project area. This approach reflects the best available historical data and provides a reasonable basis for evaluating sufficiency in the absence of basin-specific definitions established through a Groundwater Sustainability Plan (Sespe Consulting 2025a).

Sespe Consulting (2025a) used the groundwater supply estimates provided by Provost & Pritchard Consulting Group (2018), which addressed normal, dry, and multiple-dry year conditions based on the driest recorded three-year period (1974-1977). During that time, local well production data indicated that groundwater supply decreased to approximately 320 acre-feet per year in the third consecutive year of drought, as compared to 597 acre-feet per year in normal years. This supply reduction of roughly 46 percent aligns with dry-year surface runoff reductions and dust control demand adjustments documented in the same study. While the annual demand for the project (77 acre-feet) remains constant across year types, the dry-year estimates used by Sespe Consulting (2025a) for the sufficiency analysis are further supported by precipitation benchmarks documented in the 2023 *Antelope Valley Watermaster Report*, which identifies 2012 (2.9 inches) as a representative dry year and confirms that recent wet years (e.g., 2023) have exceeded long-term averages. These comparisons reinforce that the 1972-1974 reference period used by Provost & Pritchard Consulting Group (2018) remains representative of multiple-dry year conditions (Sespe Consulting 2025a).

Based on the preceding discussion derived from the Water Supply Assessment prepared for the project (Sespe Consulting 2025a), the project demand is not anticipated to exceed water supplies, and no new or expanded entitlements or water supply infrastructure would be required.

Wastewater

Existing operations utilize a combination of plumbed restroom facilities with septic system(s), and portable toilets and handwashing or sanitization facilities for employee use. Wastewater treatment service is not proposed and continued operations and project reclamation would continue to use those facilities and no additional or expanded septic systems are proposed. Portable toilets utilize secondary containment (i.e., tray) and are regularly serviced by a local contractor which transports the waste by truck to facilities authorized to dispose of such waste. These practices would continue with future operations. No additional or expanded septic systems or wastewater disposal systems are proposed or necessary for the project.

Stormwater

Main stormwater channels and sediment ponds constructed during vested surface mining operations will be designed to safely pass the estimated 100-year Capital Storm Design Discharge (CSDD) peak flow with erosion control BMPs designed for the 20-year, 1-hour intensity storm event per SMARA regulations. Peak flow for diversion channels (ditches) will be estimated using the 100-year, 1-hour intensity storm event and the rational method per the Kern County Hydrology Manual. A 6-inch freeboard is required for all channels in accordance with Kern County Development Standards (Sespe Consulting 2025g). The general locations of the channels for the post-mining (reclaimed conditions), and typical sediment pond details and a typical diversion ditch section are shown on **Figure 4.10-2, Final Reclamation Drainage Plan** of this EIR.

Erosion control will primarily be provided by placing riprap in key areas. Large quantities of rock suitable for riprap are anticipated on site. Sediment will be managed through BMP alternatives such as placing rock check dams in the collection channels at select locations. Construction material stockpiles will be graded to promote runoff into the open pits where possible; benches will discourage runoff down the stockpile faces when possible. Runoff

directed into the open pits will infiltrate or evaporate; therefore, water accumulation is not expected (with the exception of mining Pit B). Furthermore, the majority of the precipitation falling directly on the construction material stockpiles is expected to seep into the pile before runoff occurs (Sespe Consulting 2025g).

As discussed in more detail in **Section 4.10, *Hydrology and Water Quality***, and detailed in the *Drainage Report* (Sespe Consulting 2025g), there are several construction material stockpile areas that, in their final condition, will not drain to a sediment pond, diversion ditch, or mining pits due to the localized topography. These areas would employ additional erosion and sediment control measures, which include the installation of straw wattles at the top-of-slope, toe-of-slope, and at 10-foot intervals on the slope face along the contours. In addition, these areas would be revegetated as described in the project Revegetation Plan (ELMT 2026). See **Figure 4.10-2, *Final Reclamation Drainage Plan***, of this EIR which shows the location of the construction material stockpile areas.

The project does not propose to construct or modify any stormwater drainage facilities outside of the project site. Onsite stormwater drainage facilities that would be constructed as part of the vested mining operations are evaluated as components of the project and would not be expected to have any additional environmental impacts beyond those evaluated and disclosed for the project in this EIR.

Electric Power, Natural Gas, and Telecommunication Facilities

The project would not require new or expanded connections or result in other impacts to electrical, natural gas, or telecommunication facilities.

Conclusion

The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, electric power, natural gas, or telecommunications facilities; therefore, impacts would be less than significant. The project would require construction of stormwater drainage facilities during vested mining operations, as discussed above. To ensure stormwater continues to be adequately addressed, Mitigation Measure **MM 4.10-1** is proposed to be implemented. With implementation of this mitigation measure, impacts with regard to stormwater drainage would be less than significant.

Mitigation Measures

Implement Mitigation Measure **MM 4.10-1** (see **Section 4.10, *Hydrology and Water Quality***).

Level of Significance after Mitigation

With implementation of **Mitigation Measure MM 4.10-1**, impacts would be less than significant.

Impact 4.17-2: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

As discussed in the *Water* subsection of **Impact 4.17-1**, above, the *Water Supply Assessment* prepared for the project (Sespe Consulting 2025a), concludes that the project water demand is

not anticipated to exceed water supplies. To assess water supply sufficiency during normal, dry, and multiple dry years, the *Water Supply Assessment* (Sespe Consulting 2025a) uses groundwater supply estimates provided by Provost & Pritchard Consulting Group (2018), which addressed normal, dry, and multiple-dry year conditions based on the driest recorded three-year period (1974-1977). During that time, local well production data indicated that groundwater supply decreased to approximately 320 acre-feet per year in the third consecutive year of drought, as compared to 597 acre-feet per year in normal years. This supply reduction of roughly 46 percent aligns with dry-year surface runoff reductions and dust control demand adjustments documented in the same study. While the annual demand for the project (77 acre-feet) remains constant across year types, the dry-year estimates used by Sespe Consulting (2025a) for the sufficiency analysis are further supported by precipitation benchmarks documented in the 2023 *Antelope Valley Watermaster Report*, which identifies 2012 (2.9 inches) as a representative dry year and confirms that recent wet years (e.g., 2023) have exceeded long-term averages. These comparisons reinforce that the 1972-1974 reference period used by Provost & Pritchard Consulting Group (2018) remains representative of multiple-dry year conditions (Sespe Consulting 2025a).

Based on the *Water Supply Assessment* (Sespe Consulting 2025a), the project water demands would be met through the use of existing groundwater wells with a sufficient supply during normal, dry, and multiple dry years. Therefore, this impact would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.17-3: The project would result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

The project site is not serviced by a wastewater treatment provider and proposes no changes. The existing facility currently utilizes a combination of plumbed restroom facilities with septic system(s), and portable toilets and handwashing or sanitization facilities and plans to continue use of those facilities. No additional or expanded septic systems are proposed as part of the project, and wastewater treatment service will not be necessary for this project (Sespe Consulting 2023). Considering the project site is not serviced by a wastewater treatment provider and proposes no changes, no impact would occur.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

No impact would occur.

Impact 4.17-4: The project would generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

There will be no change in solid waste generated as a part of the project, except as described below pertaining to **Impact 4.17-5**. The demolition crew would demolish the stationary human-made items onsite required to be removed by the Reclamation Plan (including the cement plant as described below), then the salvage crew would sort the material comprising those items (as well as other human-made items onsite not requiring demolition, such as unused wire and pipe) into two categories (waste and recyclables) and transport the material to appropriately permitted facilities for disposal/recycling as applicable. Any waste will be disposed of (or recycled) in accordance with all applicable local, state, and federal statutes and regulations (Sespe Consulting 2023).

Demolition of the cement plant is expected to occur in approximately 200 years upon completion of vested surface mining operations. Demolition operations are assumed to occur 250 days per calendar year for a total of 400 working days to complete the cement plant demolition. Demolition will be completed using onsite equipment to the extent feasible, and demolition material will be hauled from the site using on-road haul trucks. The total weight of demolition material that would be transported from the project site is estimated to be approximately 60,000 tons (Trinity Consultants 2025). Demolition of the cement plant would be completed by an appropriately licensed contractor, and the waste generated would be salvaged/recycled to the extent feasible, while any remaining waste would be disposed of at appropriate facility(ies).

The project is not expected to generate solid waste in an amount that would exceed the capacity of local landfills, and this impact would remain less than significant with implementation of Mitigation Measure **MM 4.17-1**.

Mitigation Measures

MM 4.17-1 During reclamation activities as authorized by this approval, debris and waste generated shall be recycled to the extent feasible. Wastes that require special disposal shall be handled according to applicable regulations that are in effect at the time of disposal.

- a. An onsite Recycling Coordinator shall be designated by the project proponent/operator to facilitate recycling of all waste generated during reclamation activities, through coordination with the onsite contractors, local waste haulers, and/or other facilities that recycle such wastes.
- b. The onsite Recycling Coordinator shall also be responsible for ensuring that wastes that require special disposal are handled according to the State and County regulations that are in effect at the time of disposal.
- c. Contact information of the Recycling Coordinator shall be provided to the Kern County Public Works Department – Waste Management

Division prior to commencement of operations as authorized by this approval.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.17-1, impacts would remain less than significant.

Impact 4.17-5: The project would comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.

The 1989 California Integrated Waste Management Act (AB 939) requires Kern County to attain specific waste diversion goals. In addition, the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires expanded or new development projects to incorporate storage areas for recycling bins into the project design. Implementation of Mitigation Measure MM 4.17-1, above, would ensure compliance with waste diversion and recycling requirements by requiring recycling during the life of the project. The proposed project would be required to comply with all Federal, State, and local statutes and regulations related to the handling and disposal of solid waste. Therefore, implementation of the project would result in less-than-significant impacts regarding compliance with management and reduction statutes and regulations related to solid waste.

Mitigation Measures

Implement Mitigation Measure MM 4.17-1.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.17-1, impacts would remain less than significant.

Cumulative Setting Impacts and Mitigation Measures

Cumulative Setting

Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. **Section 3.7, *Cumulative Effects Overview***, of this EIR discusses cumulative projects near the project. (**Table 3-15, *Cumulative Projects List***, in **Chapter 3, *Project Description***, lists specific projects considered in the cumulative impact analysis.) The geographic scope for cumulative impacts to utilities and service systems includes closely related past, present, and reasonably foreseeable probable future projects.

Impact 4.17-6: The project would contribute to cumulative impacts to utilities and service systems.

Impacts of the project would be cumulatively considerable if they would have the potential to cause significant effects in combination with similar impacts of other past, present, or reasonably foreseeable projects; however, as discussed above, the project would place few demands on water, stormwater drainage, and wastewater and solid waste disposal. As discussed in the previous impact analyses, the project would generate a minimal volume of wastewater, would require water for dust suppression and would have sufficient water supply available to

serve the project, would not generate a substantial amount of stormwater runoff, and would not require new electrical, natural gas, or telecommunication connections. The project would contribute a less-than-significant amount of solid waste to local landfill(s) and would comply with all applicable Federal, State, and local regulations related to solid waste. Thus, the project would not require or result in the construction of new utility facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. To ensure stormwater is adequately addressed, Mitigation Measure **MM 4.10-1** is proposed to be implemented. With implementation of this mitigation measure, impacts with regard to stormwater drainage would be less than significant.

The project would generate a minimal amount of waste and is not expected to affect Kern County landfills significantly. However, the generation of waste from cumulative projects could result in a cumulative impact. To ensure that the project reduces the amount of waste sent to landfills, Mitigation Measure **MM 4.17-1** would require debris and waste to be recycled to the extent feasible. In addition, this mitigation measure requires that an onsite recycling coordinator be designated by the project to facilitate recycling efforts. Therefore, the project's contribution to this impact would be less than significant. Other planned projects are expected to comply with all applicable Federal, State, and local waste reduction policies as well. Therefore, the project would not be expected to combine with impacts from past, present, or reasonably foreseeable projects and result in a cumulative impact associated with utilities and service systems.

Mitigation Measures

Implement Mitigation Measures **MM 4.10-1** and **MM 4.17-1**.

Level of Significance after Mitigation

With implementation of Mitigation Measures **MM 4.10-1** and **MM 4.17-1**, cumulative impacts would remain less than significant.

Section 4.18

Wildfire

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4.18.1 Introduction

This section of the Environmental Impact Report (EIR) discusses potential impacts related to wildland wildfire impacts. The analysis in this section is based on review of existing conditions of the site and surrounding areas, the project plans, information from the California Department of Forestry and Fire Protection (CAL FIRE), Kern County Fire Hazards Severity Zone (FHSZ) Maps, and the *Wildfire Resource Analysis Memorandum – CalPortland Company, Proposed Mojave Mine Reclamation Plan Amendment* (Sespe Consulting 2025b) included as **Appendix L** of the EIR.

4.18.2 Environmental Setting

Site Characteristics and Fire Environment

The region in which the project site is located consists of varied topography containing rocky hillsides, desert scrubland, rolling hills, and desert washes. The areas surrounding the project site are primarily comprised of barren and undeveloped desert land, with few structures or built-out land uses. Oak Creek Road, which connects to the Facility entrance, runs east-west along the site's northern boundary, and Tehachapi Willow Springs Road bisects the project site and runs north-south along a portion of the project site's western boundary. Surrounding land uses consist of open space, renewable energy generation (i.e., wind turbines), and other existing mining and industrial uses. Other than large wind turbines and associated infrastructure, there are few existing structures or developed land uses in the areas immediately adjacent to the project site.

Site elevations range from approximately 3,420 to 6,085 feet above mean sea level (amsl). The diverse terrain of steep ridgelines, rocky hillsides, rolling hills, and flat desert scrubland supports a variety of habitats. Most of the area consists of moderately steep to very steep ridgelines with rolling hills at the base of the mountainous terrain which support juniper woodlands and mixed woody scrub vegetation.

Generally, the region has climate typical of the Mojave Desert, with hot, dry summers and mild winters with sporadic precipitation. Per the Western Regional Climate Center (WRCC), the average maximum temperature in Mojave is 97.6 degrees Fahrenheit (°F) in July, and the average minimum temperature is 32.9 °F in December. The average annual precipitation is 5.9 inches and tends to peak in February in the form of rain (Sespe Consulting 2025b citing WRCC 2021). This climate has made the region relatively stable, yet dry, throughout the year with regard to fluctuating weather patterns.

Access to the project site for ongoing vested mining and reclamation areas would continue to be provided by the existing main access point located near the existing cement plant, connecting to Oak Creek Road between State Route 58 and Tehachapi Willow Springs Road.

This existing access road connecting to Oak Creek Road has and will continue to provide ingress/egress to the facility and directs all contractors and visitors to the main office where they must receive authorization prior to entrance into the project proponent properties. Access to the project site west of Tehachapi Willow Springs Road is via an existing access point along Tehachapi Willow Springs Road which bisects the southwestern portion of the site; an additional access point along Tehachapi Willow Springs Road to provide access to the project site west of Tehachapi Willow Springs Road may potentially be established in the future at a location yet to be determined.

Portions of the project site are located within areas of Kern County designated by the California Department of Forestry and Fire Protection (CAL FIRE) as having either “Moderate”, “High” or “Very High” Fire Hazard Severity Zones (FHSZ) in State Responsibility Areas (SRA) as shown on **Figure 4.18-1, Fire Hazard Severity Zones for State Responsibility Areas**. The entirety of the project site is also located within Local Responsibility Area (LRA) with FHSZ ratings of “Moderate”, “High” or “Very High” (Sespe Consulting 2025b).

Fire History

Fire history information can provide an understanding of fire frequency, fire type, most vulnerable project areas, and significant ignition sources. Fire history represented in this section uses CAL FIRE’s Historical California Wildfires mapping Statewide Fire Map that shows the history of fire perimeters and data (CAL FIRE 2025).

Based on a review of CAL FIRE mapping and data, the following fires were identified as having occurred partially within the project site within the past 20 years:

- The 2006 Energy Fire covered approximately 780 acres within and adjacent to the portion of the project site west of Tehachapi Willow Springs Road. Approximately 40 percent of the burn area was within the project site along and west of Tehachapi Willow Springs Road. The incident was contained on May 27, 2006, and the cause was due to equipment use activity (not the project proponent) (CAL FIRE 2025).
- The 2009 Cameron Fire covered approximately 208 acres near the intersection of Tehachapi Willow Springs Road and Oak Creek Road. Approximately 50 percent of the burn area was within the northwestern portion of the project site near this intersection. The incident was contained on July 6, 2009, and the cause was due to unknown / unidentified activity (CAL FIRE 2025).
- The 2011 Canyon Fire covered approximately 14,585 acres within and adjacent to the portion of the project site west of Tehachapi Willow Springs Road. Approximately 25 percent of the burn area was within the project site southwest of Tehachapi Willow Springs Road. The incident was contained on September 10, 2011, and the cause was due to aircraft activity (CAL FIRE 2025).

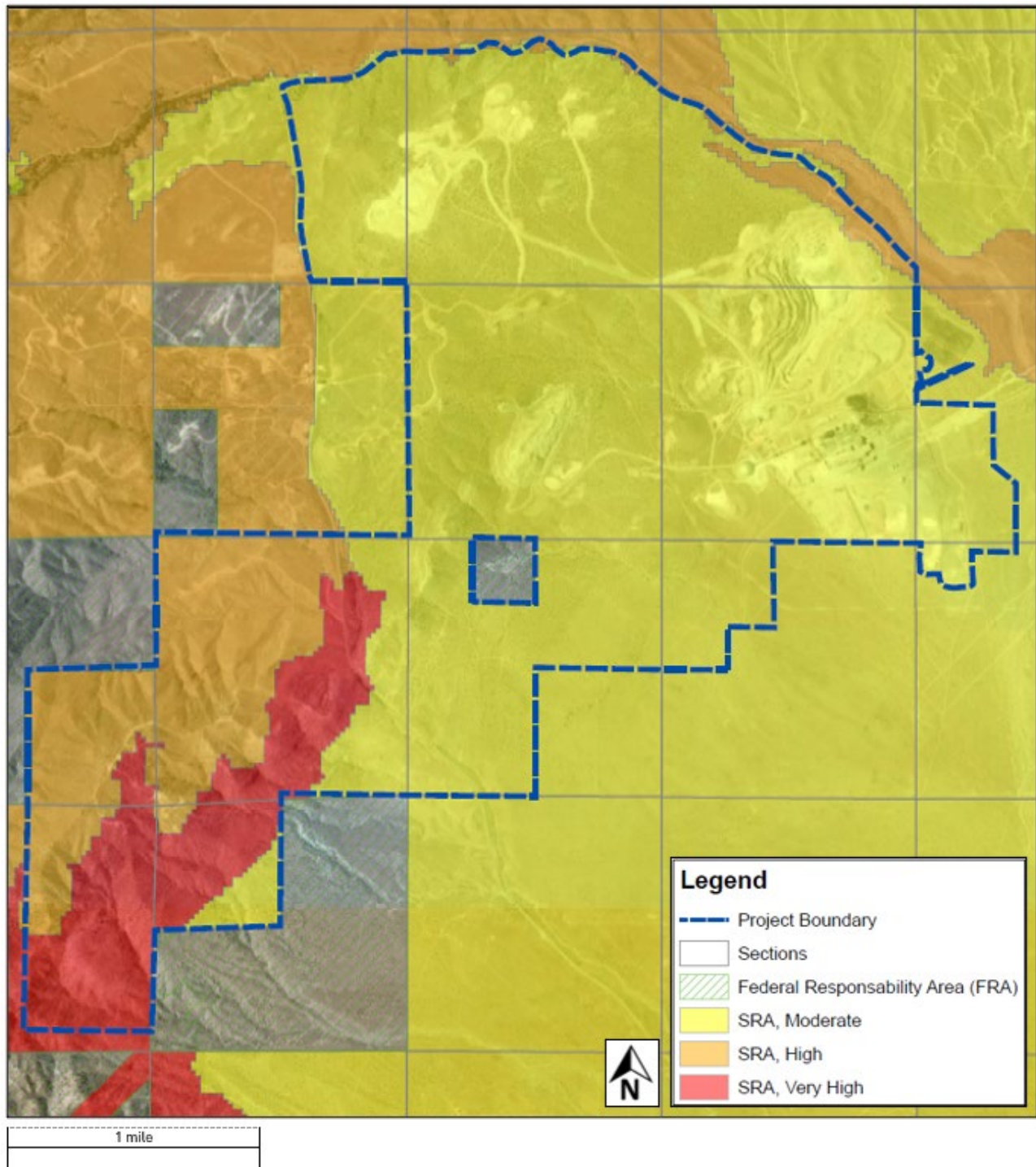


Figure 4.18-1
Fire Hazard Severity Zones for State Responsibility Areas

- The 2024 Cal Fire covered approximately 60 acres north of the northern boundary of the project site east of Tehachapi Willow Springs Road. Approximately 5 percent of the burn area was within the project site with the rest of the fire area to the north of the site. The incident was contained on August 16, 2024, and the cause was due to unknown / unidentified activity (CAL FIRE 2025).
- The 2024 Turbine Fire covered approximately 329 acres within the project site and within the BLM parcel surrounded by the project site east of Tehachapi Willow Springs Road. Approximately 85 percent of the burn area was within the project site, with the remainder within the approximately 40-acre BLM parcel. The incident was contained on August 16, 2024, and the cause was due to powerline activity (CAL FIRE 2025).

Vegetation (Fuels)

The project site includes approximately 825 acres of disturbed land that has been previously cleared for mining and cement plant operations and related activities and approximately 640 acres of lands burned during wildfires in 2006 and 2011 that are revegetating with currently undetermined plant communities. Plant communities identified within the project site consist of approximately 1,611 acres of California Juniper Woodland, approximately 950 acres of Mojave Desert Scrub, approximately 12 acres of oak woodland, approximately 287 acres of Joshua Tree Woodland. Additionally, fifteen ephemeral drainage channels have been delineated within the project site, composing a total of approximately 19.15 acres, some of which support riparian habitat (RCA 2025, ELMT 2025).

4.18.3 Regulatory Setting

State

California Fire Code

The California Fire Code (California Code of Regulations [CCR] Title 24, Part 9), most recently updated in 2025, establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. Chapter 6 (Building Services and Systems) of the Fire Code focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. Building services and systems are addressed, including emergency and standby power systems, electrical equipment, wiring and hazards, and stationary storage battery systems. Chapter 33 (Fire Safety During Construction and Demolition) of the Fire Code outlines general fire safety precautions to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment and promote prompt response to fire emergencies. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems,

fire service features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface (WUI) areas.

California Building Code Chapter 7A

Chapter 7 of the California Building Code, most recently updated in 2025, details the materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a WUI Fire Area. A WUI Area is defined in Section 702A as a geographical area identified by the State as an FHSZ in accordance with California Public Resources Code (PRC) Sections 4201–4204 and California Government Code Sections 51175–51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. The building code details the materials, systems, and assemblies used for structural fire resistance and fire-resistance-rated construction separation of adjacent spaces to safeguard against the spread of fire and smoke within a building and the spread of fire to or from buildings.

Public Resources Code Sections 4291–4299

PRC Sections 4291–4299 et seq. require that brush, flammable vegetation, or combustible growth within 100 feet of buildings be maintained. Vegetation that is more than 30 feet from the building, less than 18 inches high, and important for soil stability may be maintained, as may single specimens of trees or other vegetation that is maintained so as to manage fuels and not form a means of rapid fire transmission from other nearby vegetation to a structure. Additionally, the PRC outlines infraction fees, certification, and compliance procedures applicable with State and local building standards, including those described in California Government Code Section 51189(b).

Local

Kern County General Plan

Chapter 4. Safety Element

Chapter 4.6 Wildland and Urban Fire

Policies

- **Policy 1.** Require discretionary projects to assess impacts on emergency services and facilities.
- **Policy 4.** Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.
- **Policy 6.** All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.

Implementation Measures

- **Implementation Measure A.** Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

Cameron Canyon Specific Plan

Section X. Seismic Safety and Safety Element

Policies

- **Policy 1.** Constrained areas will be guided toward open space uses, such as rangeland and watershed use.

Implementation Standards

- **Implementation Standard 1.** Development shall be subject to the standards of the Uniform Building Code (UBC), Uniform Fire Code (UFC), and Uniform Plumbing Code (UPC) as adopted by Kern County.

Kern County Fire Code

Chapter 17.32 of the Kern County Municipal Code details the Kern County Fire Code, which is an adoption of the 2016 California Fire Code and the 2015 International Fire Code with some amendments. The purpose of the Kern County Fire Code is to regulate the safeguarding of life, property, and public welfare to a reasonable degree from the hazards of fire, hazardous materials release, and/or explosion due to handling of dangerous and hazardous materials; conditions hazardous to life or property in the occupancy and use of buildings and premises; the operation, installation, construction, and location of attendant equipment; the installation and maintenance of adequate means of egress; and providing for the issuance of permits and collection of fees therefore (Kern County 2019).

Kern County Fire Department Wildland Fire Management

The Kern County Fire Department submits a unit Annual Strategic Fire Plan to CAL FIRE and it is posted on their Office of the State Fire Marshall website (<https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/pre-fire-planning>). The Annual Strategic Fire plan accomplishes the mission of the Kern County Fire Department (KCFD) by collecting and sharing information related to wildfire risk and response. This helps safeguard people, protect property, infrastructure, cultural heritage, and resources of Kern County.

Kern County also has a Community Wildfire Protection Plan (CWPP) that was updated in 2022 and covers the entirety of Kern County (https://kerncountyfire.org/wp-content/uploads/Kern-CWPP_final_combined_11March2022.pdf). The CWPP addresses hazards and risks of wildland fire throughout Kern County and makes recommendations for fuel reduction projects, public outreach and education, structural ignitability reduction, and fire response capabilities.

4.18.4 Impacts and Mitigation Measures

Methodology

The proposed project's potential impacts associated with wildfires have been evaluated using a variety of resources, including CAL FIRE maps showing FHSZs, Fire and Resource Assessment Program (FRAP), and fire history; site vegetation data; project location maps; a *Wildfire Resource Analysis Memorandum – CalPortland Company, Proposed Mojave Mine Reclamation Plan Amendment* (Sespe Consulting 2025b) included as Appendix L of the EIR, and project characteristics. Wildfire impacts are considered on the basis of: (1) off-site wildland

fires that could impact the proposed project; and (2) on-site generated combustion that could affect surrounding areas. Using the aforementioned resources and professional judgment, impacts were analyzed according to California Environmental Quality Act (CEQA) significance criteria described below.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist (updated in May 2019) identify the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant impact with respect to wildfires.

A project would have a significant impact with respect to wildfires if it would be located in or near SRAs or lands classified as very high FHSZs, and if the project would:

- a. Substantially impair an adopted emergency response plan or emergency evacuation plan;
- b. Due to slope, prevailing winds, or other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or
- d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Project Impacts

Impact 4.18-1: The project could impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

The project is subject to the applicable requirements outlined in adopted Kern County emergency response and evacuation plans for the area. Additionally, the *Kern County General Plan* and County Code of Ordinances contain various goals and policies that specify emergency response procedures, evacuation routes, and other factors. The KCFD also publishes various plans and guidance documents related to emergency response and evacuation procedures in the event of a wildfire. The KCFD's Emergency Operations Plan (EOP) provides a comprehensive, single source of guidance and procedures for the County to prepare for and respond to significant or catastrophic natural, environmental or conflict-related risks that produce situations requiring coordinated response. The KCFD also publishes the "Ready, Set, Go!" (Kern County Fire Department, 2021) which provides guidance to property owners on how to evacuate safely during wildfires. These documents also provide guidance to County agencies and first responders regarding abatement of various emergencies, identification of organizational structures and relationships, and responsibilities and functions necessary to protect life and property. The project proponent would continue to adhere to the guidance

provided by the KCFD related to emergency preparedness and evacuation during project reclamation activities (Sespe Consulting 2025b).

The project would require both light duty vehicles/automobiles and heavy-duty haul trucks to travel to and from the site each day to conduct reclamation activities, however, these trips would not exceed the trip count associated with the vested mining operations currently occurring at the site. Specifically, there would be no increase in the number of onsite employees or employee vehicles, nor would additional haul trucks enter onto or exit the project site via public roadways during reclamation. Conversely, the haul truck activity is expected to decrease during project reclamation compared to existing levels associated with vested operations, as existing materials deliveries would be discontinued and there would be no significant material quantities imported/exported during reclamation (Sespe Consulting 2025b).

Additionally, the project would not change the manner in which vehicles and haul trucks access or egress the vested facility. The site is located in a rural, sparsely developed area with limited population. The existing ingress and egress access route in and out of the facility is near the northeast corner of the project site, via the access road connecting to Oak Creek Road. In the event that a wildfire threatens the project site, evacuation from the portion of the project site east of Tehachapi Willow Springs Road would occur from this single access point to Oak Creek Road to the northeast. Access to the project site west of Tehachapi Willow Springs Road is via an existing access point along Tehachapi Willow Springs Road which bisects the southwestern portion of the site; an additional access point along Tehachapi Willow Springs Road to provide access to the project site west of Tehachapi Willow Springs may potentially be established in the future at a location yet to be determined. Given there is no change in facility employees, contractors or vendors, and that only a limited number of employees and/or contractors/vendors would be onsite at any given time, use of the aforementioned access points would not result in new impacts as a result of the proposed project. The addition of a nominal number of vehicles onto Oak Creek Road and Tehachapi Willow Springs Road during an emergency evacuation would not result in congestion or obstruction of access along any local roadways that would impair emergency response or public safety (Sespe Consulting 2025b).

Chapter 4 of the *Kern County General Plan* (Kern County 2009) contains various goals and policies pertaining to emergency response/evacuation in the unlikely event of a wildfire. Specifically, policies within Chapter 4.6 (Wildland and Urban Fire) of the *Kern County General Plan* require discretionary projects to assess impacts on emergency services and facilities, and ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents. As discussed above, the existing access points and evacuation routes in and out of the existing facility, including Oak Creek Road, would have adequate capacity to accommodate the limited number of vehicles that would need to evacuate the project site if a wildfire were to occur (Sespe Consulting 2025b).

Although not specific to emergencies or evacuations, during reclamation the project proponent would continue to manage weeds and other hazardous vegetation onsite that may create fire, health or safety hazards for property or persons in accordance Chapter 8.46 (Weeds and Other Hazardous Growths) of the Kern County Code of Ordinances. Once onsite reclamation activities commence, the majority of the site, particularly the active mine pit, stockpile areas, and associated haul roads, would be disturbed and maintained in a manner that is largely devoid

of vegetation and potentially flammable debris. Additionally, continued compliance with weed abatement requirements during vested mining operations would ensure vegetative fire fuel loads would be minimized across the site. Although portions of the site would be revegetated as part of project reclamation, the revegetation seed mix includes a high percentage of native grassland species, which generally have fire resistant characteristics. Additionally, noxious weeds would be actively managed throughout the project site during reclamation in accordance with SMARA Section 3705 (Performance Standards for Revegetation). As such, the project is consistent with this ordinance (Sespe Consulting 2025b).

Chapters 17.32 and 17.34 of the County Code also discuss requirements for sites located within the “Wildland-Urban Interface (WUI)” areas. Per CAL FIRE’s most recent “WUI” map, the project site is not located within a designated WUI. There is an area just north of the project site designated as a wildfire “Influence Zone”, which is defined as areas that contain “wildfire susceptible vegetation” up to 1.5 miles from a WUI or Wildland Urban Intermix area as designated by CAL FIRE. Because the project site is not located within a WUI, it is consistent with this ordinance (Sespe Consulting 2025b).

Lastly, site operations managers and personnel would continue to be trained in fire prevention and emergency response, and fire suppression equipment would continue to be maintained onsite during project reclamation. Reclamation would comply with applicable existing State and local codes and ordinances as previously described above related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of flammable materials spills to minimize the potential for such activities to cause a wildfire event or to induce the spread of wildfire (Sespe Consulting 2025b).

For the reasons outlined above, the project would not create any new impediments to existing evacuation routes or result in unsafe conditions in the event of a wildfire. The existing access point in the northeast corner of the project site would allow for the safe evacuation of onsite employees and vehicles onto Oak Creek Road. Access point(s) onto Tehachapi Willow Springs Road, as described above, would allow for the safe evacuation of onsite employees and vehicles onto Tehachapi Willow Springs Road. Additionally, the project would not conflict with any of the applicable emergency response or evacuation plans, policies and procedures found in the County’s General Plan, Code of Ordinances or other emergency plans, nor would it impede safe and orderly evacuation of people and vehicles via Oak Creek Road and/or Tehachapi Willow Springs Road. Therefore, the project would have a less than significant impact and no mitigation measures are required (Sespe Consulting 2025b).

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.18-2: The project would expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire due to slope, prevailing winds, and other factors.

As discussed in **Chapter 3, *Project Description***, the project proponent intends to continue vested mining operations and the project involves an amended reclamation plan to provide for reclamation of mined lands, which is subject to the County's approval. The project does not include the development/construction of residential or other uses involving human occupation, as the project site would be reclaimed to open space.

As described in **Section 4.18.2, *Environmental Setting***, and shown in **Figure 4.18-1, *Fire Hazard Severity Zones for State Responsibility Areas***, the project site is located in an area identified as having a combination of "Moderate," "High," and "Very High" FHSZ within the SRA (CAL FIRE 2025). While the project site currently has some areas of native vegetation, the majority of these areas would be cleared to accommodate future vested mining activities. Therefore, ignition of existing vegetation would be most likely to occur during periods of surface clearing and excavation during ongoing vested mining operations, and not with the project reclamation activities. Once vegetation is removed and excavation recesses into the mining area, and overburden stockpile footprints are established, vegetation fuel sources would become limited or nonexistent within the mining and other operational areas. The cleared mining and stockpile areas and pit slopes would serve as a barrier between adjacent County lands in the unlikely event of a nearby wildfire (Sespe Consulting 2025b).

Once project reclamation commences, the majority of the project site would be disturbed due to vested mining operations, and would therefore be generally devoid of vegetation. Additionally, any debris, structures and equipment would be removed during site reclamation in accordance with local, state and federal regulations. As such, there would be no buildings or structures installed and/or remaining post-reclamation that would create or exacerbate a fire hazard on the project site (Sespe Consulting 2025b).

Project reclamation would include revegetation of disturbed areas in accordance with the proposed reclamation plan. As proposed, the reclamation plan would include reseeding with the seed mix presented in **Table 4.18-1, *Proposed Revegetation Plant Seed Mix***. The proposed revegetation seed mix species would be native and drought-tolerant (i.e., low-lying shrubs and grasses), and would not result in a substantial increased fire risk (Sespe Consulting 2025b). Ultimately, because the site will be cleared of all existing structures and stressed vegetation, no new structures would be constructed, and because proposed revegetation species would be native and not prone to wildfires, the project would decrease wildfire risk to project personnel and vendors compared to the existing onsite conditions (Sespe Consulting 2025b).

Table 4.18-1 Proposed Revegetation Plant Seed Mix

Common Name	Scientific Name	Application Rate (pounds per acre)
Burrobush	<i>Ambrosia dumosa</i>	0.50
Cheesebush	<i>Ambrosia salsola</i>	1.00
Fiddleneck	<i>Amsinckia tessellata</i>	0.25
Evening primrose	<i>Cammissonia californica</i>	0.25
Rigid spineflower	<i>Chorizanthe rigida</i>	0.25
Desert pincushion	<i>Chaenaetis fremontii</i>	0.25
Sandaster	<i>Corethrogyne filaginifolia</i>	1.00
Rabbitbrush	<i>Ericameria nauseous</i>	1.00
Mormon tea	<i>Ephedra nevadensis</i>	2.00
Narrow leaf goldenbush	<i>Ericameria linearifolia</i>	0.75
Flat-topped buckwheat	<i>Eriogonum fasciculatum</i>	2.00
Spiny hopsage	<i>Grayia spinosa</i>	--
matchweed	<i>Gutierrezia californica</i>	1.00
Thurber's buckwheat	<i>Eriogonum thurberi</i>	0.50
California juniper	<i>Juniperus californica</i>	3.00
Creosote bush	<i>Larrea tridentata</i>	1.00
Desert beardtongue	<i>Penstemon incertus</i>	0.75
Antelope Bitterbrush	<i>Purshia tridentata</i>	1.00
Phacelia	<i>Phacelia distans</i>	0.25
Chia	<i>Salvia columbariae</i>	0.25
Desert needlegrass	<i>Stipia speciosa</i>	1.00
Cotton thorn	<i>Tetradymia spinosa</i>	1.00
TOTAL pounds per acre		20.00

Source: Table 5-5, Preliminary Seed Mix, of "Mojave Life of Mine Reclamation Plan Amendment" (Sespe Consulting 2026)

Additionally, the project reclamation plan proposes the revegetation performance standards presented in **Table 4.18-2, Proposed Revegetation Performance Standards**.

Table 4.18-2 Proposed Revegetation Performance Standards¹

Landform	Perennial Cover (%)	Species Diversity (Perennial) ²	Species Density ²
Rocky Slopes	14	6	18
Gently Sloping Terrain	24	7	28
Steep Terrain	22	6	28

Source: Table 5-2, Revegetation Performance Standards, of "Mojave Life of Mine Reclamation Plan Amendment" (Sespe Consulting 2026).

Notes:

1. Proposed performance standards based upon 45% of baseline cover, and 40% of baseline species density/diversity.
2. Native perennials per 50 square meters.

Vegetation clearing during vested mining would make the potential for a fire to occur on the project site unlikely, as such the potential for wildfires to occur on the project site is considered low and the project is not expected to exacerbate wildfire risks. The project would not include the construction of any residential structures or other uses involving human occupation, and the project would not increase the number of onsite workers. Therefore, in the unlikely event of a wildfire, the project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Similarly, as discussed in **Section 4.9, Hazards and Hazardous Materials**, in the event that a wildfire impacted the project site, it is not expected that hazardous materials from the project would be released into the environment. The project would not, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would be less than significant.

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.18-3: The project would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

As discussed in **Chapter 3, Project Description**, the portion of the project site east of Tehachapi Willow Springs Road is accessed from an existing approximately 1-mile-long private access road that connects to Oak Creek Road approximately 3.5 miles east of Tehachapi Willow Springs Road. Access to the project site west of Tehachapi Willow Springs Road is via an existing access point along Tehachapi Willow Springs Road which bisects the southwestern portion of the site; an additional access point along Tehachapi Willow Springs Road to provide access to the project site west of Tehachapi Willow Springs may potentially be established in the future at a location yet to be determined. During continued vested mining operations and project reclamation, all mining and reclamation-related access will be limited to the aforementioned access roads. Upon the project site being deemed fully reclaimed, the project site is anticipated to be accessible as described earlier in this paragraph.

No buildings, structures or equipment (with the exception of that pertaining to renewable energy wind turbines) would remain on the project site post-reclamation. Any structures, including processing plants and/or the cement plant, will be dismantled and removed once mining operations have stopped and reclamation commences. Additionally, no permanent electrical service connections and/or related infrastructure would remain onsite post-reclamation (with the exception of that pertaining to renewable energy wind turbines), and no other utility infrastructure (natural gas, sewer, etc.) would be installed or would remain onsite post-reclamation (Sespe Consulting 2025b).

While no permanent fuel tanks would be installed or remain onsite post-reclamation, at times a mobile fuel and/or maintenance truck may be brought onsite to serve and refuel mobile equipment operating during reclamation. The facility has an existing site-specific Storm Water Pollution Prevention Plan (SWPPP), which would continue to be implemented during reclamation. The SWPPP includes Best Management Practices (BMPs) that specifically address the prevention and, if needed, response to onsite spills of hazardous materials, including fuels and flammable materials (e.g., use of catch trays, cleanup measures in the event of a spill, etc.). Implementation of these procedures would mitigate the minimal potential for fires due to hazardous releases during equipment fueling and maintenance (Sespe Consulting 2025b).

Since the project would not involve the installation of any permanent new infrastructure that may exacerbate fire risk, and because mobile equipment fueling and maintenance within the project site would be conducted in accordance with CalPortland's existing safety and spill prevention procedures, the project would have a less than significant impact in terms of potential to generate onsite fires. Therefore, impacts are considered less than significant and no mitigation measures are required (Sespe Consulting 2025b).

Mitigation Measures

Mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.18-4: The project would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

As described in **Chapter 3, *Project Description***, the project site varies in topography, containing steep ridgelines, rocky hillsides, desert scrubland, rolling hills, and desert washes. An area within the southeastern portion of the project site (approximately 8 acres) encroaches into a 100-year floodplain as mapped on FEMA FIRM Panel 06029C3275E (effective September 26, 2008); however, such area is over ½ mile from any proposed mine pits, growth media stockpiles, and permanent stockpiles. The project site is located primarily in Zone X, “[a]reas determined to be outside the 0.2% annual chance floodplain.” The northernmost edge of the project site, in close proximity to Oak Creek, is located immediately adjacent to area mapped as Zone A, “[a]rea subject to 1% annual chance flood; no Base Flood Elevations determined” (Sespe Consulting 2025g).

As shown in **Chapter 3, *Project Description***, **Table 3-1, *Project Assessor Parcel Numbers, Existing General/Specific Plan Map Code, Zoning, and Approximate Acreages***, a portion of project site parcel APN 237-032-01 has a zoning designation of A-1 FP (Limited Agriculture, Floodplain Combining), a portion of project site parcel APN 237-053-01 has a zoning designation of M-3 FP (Heavy Industrial, Floodplain Combining), and a portion of APN 237-071-03 has a zoning designation of FPP (Floodplain Primary). The only portion of the project site located within a Floodplain Safety Overlay District is the portion within the

aforementioned 100-year floodplain as mapped on FEMA FIRM Panel 06029C3275E. The project site is not located within a Dam Inundation Overlay.

The region in which the project site is located consists of varied topography containing rocky hillsides, desert scrubland, rolling hills, and desert washes. The areas surrounding the project site are primarily comprised of barren and undeveloped desert land, with few structures or built-out land uses. Site elevations range from approximately 3,420 to 6,085 feet above mean sea level (amsl). The diverse terrain of steep ridgelines, rocky hillsides, rolling hills, and flat desert scrubland supports a variety of habitats. Most of the area consists of moderately steep to very steep ridgelines with rolling hills at the base of the mountainous terrain which support juniper woodlands and mixed woody scrub vegetation. In the event of a wildfire, vegetative cover, which acts to stabilize the soil, would be reduced. Without regrowth of vegetation, exposed soils would increase the rate and amount of runoff following a rain event. The project's storm water sediment ponds will retain the 10-year, 5-day (Intermediate Storm Design Discharge [ISDD]) runoff volumes and will safely pass the estimated 100-year, 1-hour peak flow event; and diversion ditches and channels will safely carry the 100-year, 1-hour (Capital Storm Design Discharge [CSDD]) peak flow. (Sespe Consulting 2025g) As described in **Section 4.7, *Geology and Soils***, the project site is generally underlain by stable soils and the slope stability analysis for the project concludes that the project's proposed stockpile slopes with implementation of recommendations in the analysis (Golder 2021a) would achieve suitable factors of safety.

Specifically, the twelve permanent stockpiles are planned to have overall slope inclinations of 1.75H:1V (29.7 degrees). Slope stability analysis of the stockpiles determined that proposed final overburden stockpile fill slopes would achieve factors of safety at, or in excess of, 1.7 under static conditions and 1.1 under pseudo-static conditions with overall slopes no steeper than 1.75H:1V, overall heights of 830 ft or less, and with tops of stockpiles near horizontal and with a minimum 50-foot offset between the toe of slope and crest of any adjacent pit. If needed, the slopes would be inspected by a California Certified Engineering Geologist (CEG) for unsafe slope conditions following a natural disaster, such as wildfire, prior to continuation of reclamation activities (Sespe Consulting 2025b). Due to the stability of the proposed pit design and proposed ongoing slope inspections/maintenance, the project would ensure that safe onsite slope conditions would be maintained following the unlikely event of a wildfire, and no additional mitigation measures are required (Sespe Consulting 2025b). This impact would remain less than significant with implementation of Mitigation Measures **MM 4.7-1** through **MM 4.7-2** (see **Section 4.7, *Geology and Soils***, for full mitigation text), **MM 4.9-5** (see **Section 4.9, *Hazards and Hazardous Materials***, for full mitigation text), and **MM 4.10-1** through **MM 4.10-2** (see **Section 4.10, *Hydrology and Water Quality***, for full mitigation text).

Mitigation Measures

Implement Mitigation Measures **MM 4.7-1** through **MM 4.7-2** (see **Section 4.7, *Geology and Soils***, for full mitigation text), **MM 4.9-5** (see **Section 4.9, *Hazards and Hazardous Materials***, for full mitigation text), and **MM 4.10-1** through **MM 4.10-2** (see **Section 4.10, *Hydrology and Water Quality***, for full mitigation text).

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

Section 3.7, *Cumulative Effects Overview*, of this EIR discusses cumulative projects near the project (Table 3-15, *Cumulative Projects List*, in Chapter 3, *Project Description*, lists specific projects considered in the cumulative impact analysis). Impacts associated with wildfire hazards are generally site-specific and have limited potential to substantially contribute to other hazards associated with other projects and activities on a local or regional basis. Projects and activities within the County are subject to various regulatory requirements, similar to those discussed here, and would minimize the hazard potential of those activities. Kern County recognizes that wildfire hazards exist throughout the County and everyday life.

Impact 4.18-5: The project would contribute to cumulative wildfire impacts.

The severity of potential hazards for individual projects would depend on the location, type, and size of development and the specific hazards associated with individual sites. Discretionary projects proposed in the County would be required to undergo individual environmental review, including review of potential impacts related to wildfire hazards that are applicable to that particular development site and proposed use. As described previously, the project site is in an area identified as having a combination of “Moderate,” “High,” and “Very High” FHSZ within the SRA and LRA (CAL FIRE 2025). Ignition of plant communities on the project site would be most likely to occur during periods of surface clearing and excavation associated with ongoing vested mining. Once vegetation is removed and excavation recesses into each mining area, vegetation fuel sources become limited or nonexistent within the mining areas. A risk of wildland fire ignition always exists when vehicles operate in or near potential fuel sources; however, with proper maintenance of equipment and standard avoidance and management measures, the risk would be reduced. Therefore, potential impacts related to wildland fires associated with the project would remain less than significant with implementation of Mitigation Measures MM 4.7-1 through MM 4.7-2 (see Section 4.7, *Geology and Soils*, for full mitigation text), MM 4.9-5 (see Section 4.9, *Hazards and Hazardous Materials*, for full mitigation text), and MM 4.10-1 through MM 4.10-2 (see Section 4.10, *Hydrology and Water Quality*, for full mitigation text).

Mitigation Measures

Implement Mitigation Measures MM 4.7-1 through MM 4.7-2 (see Section 4.7, *Geology and Soils*, for full mitigation text), MM 4.9-5 (see Section 4.9, *Hazards and Hazardous Materials*, for full mitigation text), and MM 4.10-1 through MM 4.10-2 (see Section 4.10, *Hydrology and Water Quality*).

Level of Significance after Mitigation

Cumulative impacts would be less than significant.

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Chapter 5

Consequences of Project Implementation

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Consequences of Project Implementation

5.1 Environmental Effects Found to be Less than Significant

Section 15128 of the California Environmental Quality Act (CEQA) *Guidelines* requires that an Environmental Impact Report (EIR) “contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR.” Kern County has engaged the public in the scoping of the environmental document. Comments received during scoping have been considered in the process of identifying issue areas that should receive attention in the EIR. The contents of this EIR were established based on an initial analysis included within a Notice of Preparation (NOP) prepared in accordance with the State CEQA *Guidelines* and on public and agency input received during the scoping process. Issues that were found to have no impact or less-than-significant impacts during preparation of the NOP do not need to be addressed further in this EIR.

The NOP determined that no impacts would occur that would require analysis in the EIR for the following environmental issue areas:

- Recreation
- Population and Housing

Based on the findings of the NOP and the results of scoping, a determination was made that the EIR would contain a comprehensive analysis of all environmental issues identified in Appendix G of the State CEQA *Guidelines*, with the exception of the two issue areas listed above. After further study and environmental review in this EIR, direct and indirect project-level impacts of the project would be less than significant or could be reduced to less-than-significant levels with mitigation measures for the following issue areas:

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Public Services
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

5.2 Significant Environmental Effects that Cannot Be Avoided

Section 15126.2(c) of the State CEQA *Guidelines* requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the proposed project and proposed mitigation measures are discussed in detail in **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures**, of this EIR.

As discussed in **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures**, all but one project-specific impact would be reduced to a level that is less than significant with implementation of proposed mitigation. Even with implementation of mitigation, project-specific **Impact 4.4-2** is found to be significant and unavoidable. However, no cumulative impact(s) (including **Impact 4.4-7**) are found to be significant and unavoidable with implementation of mitigation, as discussed further in **Section 5.4, Significant Cumulative Impacts**.

Table 5-1, Summary of Significant and Unavoidable Impacts of the Project, lists the significant and unavoidable impacts identified in this EIR.

Table 5-1 Summary of Significant and Unavoidable Impacts of the Project

Resource	Impact
Biological	Impact 4.4-2: The project would have a substantial adverse effect on biological resources.

5.3 Significant Irreversible Impacts

The State CEQA *Guidelines* provide the following direction for the discussion of irreversible changes (Section 15126.2(d)):

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The State CEQA *Guidelines* further stipulate that the information required by Section 15126.2(d) concerning irreversible changes, need be included only in EIRs prepared in connection with any of the activities listed in Section 15127(a)-(c). This EIR is not prepared in connection with any of the activities listed in Section 15127(a)-(c), nonetheless the Lead Agency has determined below to include the information required by Section 15126.2(d).

Determining whether the project would result in significant irreversible impacts requires a determination of whether key resources would be degraded or destroyed with little possibility of restoration.

Upon cessation of vested mining activities, the proposed reclamation plan provides for areas within the reclamation plan boundary to be reclaimed and revegetated with native species and reclaimed to open space. Proposed reclamation described in the reclamation plan includes recontouring, stabilizing, revegetation, and monitoring of final slopes and disturbed vested mining and stockpile areas; reclamation of roads not required for post-reclamation access and security, removal of ancillary equipment and facilities; and removal of the processing and cement plants.

The project would irretrievably commit materials and energy to reclamation activities. Resources that would likely be consumed as part of the proposed project would include, but are not limited to, oil, gasoline, diesel fuel, and other petroleum products for operation of project-related vehicles and equipment; water to be used for dust suppression; and other consumable products used during reclamation activities.

5.4 Significant Cumulative Impacts

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

This EIR has considered the potential cumulative effects of the proposed project and each resource section in **Chapter 4**, *Environmental Setting, Impacts, and Mitigation Measures*, contains a subsection discussing the analysis of potential cumulative impacts associated with that resource.

It is reasonable to anticipate that ongoing land uses and future development within the project vicinity will continue to result in vegetation removal, grading, and loss of habitat. Vested mining would result in a long-term loss of vegetation and habitat on the project site that could potentially provide future marginal foraging and nesting habitat for special-status species. Project reclamation following vested mining would improve site conditions as compared to conditions at the completion of vested mining through stabilization and revegetation as provided for by the project reclamation plan. Due to Federal and State regulatory requirements and Kern County policies geared toward biological resources protection, it is also reasonable to anticipate that similar mitigation will be required of other projects to minimize their impacts to biological resources. As discussed in **Section 4.4**, *Biological Resources (Impact 4.4-2)* there would be significant project-specific biological resources impacts with implementation of mitigation, nonetheless cumulative biological resource impacts are found to be less than significant with implementation of mitigation.

5.5 Growth Inducement

Section 21100(b)(5) of CEQA requires an EIR to discuss how a proposed project, if implemented, could induce growth and the impacts of that induced growth (see also State CEQA *Guidelines* Section 15126). The sections below discuss the evaluation methods used for this analysis followed by the anticipated growth effects of the project.

5.5.1 Evaluation Methods

CEQA requires the EIR to specifically discuss (State CEQA *Guidelines* Section 15126.2[e]):

the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.

Evaluation of the growth-inducing impacts of the project is based on a qualitative analysis of the direct impacts of the proposed project and the indirect impacts that could result from the proposed project. This evaluation of potential growth-inducing impacts addresses whether the project would directly or indirectly:

- foster economic, population, or housing growth;
- remove obstacles to growth;
- increase population growth that would tax community service facilities; or
- encourage or facilitate other activities that cause significant environmental impacts.

Section 15126.2(e) of the State CEQA *Guidelines* states specifically, “It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.” In other words, growth inducement is not to be considered adverse per se; impacts on resources resulting from growth may be too far removed from the actions of the agency to require mitigation by the agency. The goal of the EIR in this regard, therefore, is one of disclosure.

5.5.2 Growth Effects of the Project

As described in **Chapter 3, *Project Description***, the project proponent proposes this reclamation plan amendment in order to allow for continued reclamation of mineral resource development activities within the vested properties to provide a stable and economically viable source of limestone and construction materials feedstock to CalPortland’s existing cement and processing plants in order to produce cement and construction materials to meet and maintain the market quality and quantity requirements needed for local and regional markets. The continuation of operations throughout the vested properties requires the County’s approval of the proposed project to amend and replace the existing 1979 reclamation plan through approval of a reclamation plan applicable to approximately 4,367 acres of the vested properties inclusive of most of the 1,542 acres currently subject to the 1979 reclamation plan. An increase of approximately 2,825 acres would bring the

reclamation plan boundary through the proposed amendment to a total of approximately 4,367 acres.

Upon cessation of vested mining activities, the proposed reclamation plan provides for the disturbed areas within the reclamation plan boundary to be reclaimed to open space as described in the proposed reclamation plan, including revegetation with native species for disturbed areas. Proposed reclamation includes recontouring, stabilizing, revegetation, and monitoring of most final slopes and disturbed vested mining and stockpile areas; reclamation of roads not required for post-reclamation access and security; removal of ancillary equipment and facilities; and removal of the processing plant and cement plant and all cement plant related facilities. The proposed reclamation plan does not include removal of any rail facilities outside the reclamation plan boundary, nor the removal of any wind turbines.

The proposed project will not induce substantial unplanned population growth through the construction of new homes, roads, or other infrastructure nor displace any housing units or people. The existing Mojave Mine maintains approximately 21 employees, and typically has 16 employees within the vested mine site. The project proponent estimates that maximum reclamation operations would result in an additional 24 employees for reclamation activities. The project proponent anticipates that vested mining at the site will be completed in approximately the year 2222 and that reclamation activities would require approximately two years for completion in the year 2224, followed by approximately three additional years of revegetation monitoring, with final site reclamation completed in the year 2227. The majority of project-generated jobs are expected to be performed by workers from the local and regional area, and such jobs would be performed on a temporary and short-term basis during the period of reclamation. Any temporary housing needed for these workers is expected to be provided in nearby communities, including Tehachapi and Mojave. Therefore, the project is not anticipated to directly or indirectly induce the development of any new housing or businesses within the local communities.

The project would not extend or expand infrastructure to serve adjacent parcels, nor would it expand infrastructure capacity beyond the level necessary to serve the project. Thus, the project would not make infrastructure available to adjacent parcels and would not induce growth that might not otherwise occur.

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Chapter 6

Alternatives

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6.1 Introduction

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) describes a range of reasonable alternatives to the project or to the location of the project site that could feasibly avoid or lessen any significant environmental impacts of the project while attaining most of the project's basic objectives. An EIR also must compare and evaluate the environmental effects and comparative merits of the alternatives. The EIR need not consider every conceivable alternative, but it must consider a "reasonable range" of potentially feasible alternatives that will foster informed decision making and public participation. (CEQA Guidelines Section 15126.6(c).)

The following list is a summary of the key alternatives provisions of the State CEQA *Guidelines* (Section 15126.6):

- The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.
- The No-Project Alternative shall be evaluated, along with its impacts. The No-Project analysis shall discuss the existing conditions at the time the notice of preparation was published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.
- The range of alternatives required in an EIR is governed by a "rule of reason;" therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision-making. Among the factors that may be taken into account when addressing the feasibility of alternatives, as described in Section 15126.6(f)(1) of the State CEQA *Guidelines*, are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the project proponent could reasonably acquire, control, or otherwise have access to an alternative site. An EIR need not include consideration of an alternative

whose effects could not be reasonably identified, whose implementation is remote or speculative, and that would not achieve the basic project objectives.

6.2 Alternatives Eliminated from Further Consideration

State CEQA Guidelines Section 15126.6(c) requires that an EIR identify alternatives that were considered and rejected as infeasible, and briefly explain the reasons for rejection. Among the factors that may be used to eliminate alternatives from detailed consideration in any EIR are: (1) failure to meet most of the basic project objectives; (2) infeasibility; and (3) inability to avoid significant environmental impacts. The following alternatives were initially considered but were eliminated from further consideration in this EIR because they do not meet project objectives and/or were infeasible.

6.2.1 Alternative Locations

The project is reclamation of vested mining areas. As such, an alternative location is infeasible for this project as the reclamation project must be located at the site of vested mining operations. For this reason, the Lead Agency has eliminated alternative locations from further consideration in this alternatives analysis.

6.2.2 Alternative (Offsite) Overburden Disposal

Kern County initially considered whether it would be feasible to require the project proponent to dispose of overburden generated by continued mineral extraction at an offsite location. Offsite disposal of overburden material could be affected by transporting the material by truck or rail to another location for permanent placement. Although the concept is clear, too little is known about whether the material would be transported by truck or rail or some combination of the two, which would affect the analysis of air and greenhouse gas (GHG) emissions, transportation and traffic, noise and other impacts. Too little also is known about the range of possible destinations, distances, remaining capacities of solid waste disposal facilities (landfills) that could accommodate the overburden and about whether some marketable or other use could be made of the material, thereby avoiding their disposal in landfill(s). Further, because the rate of mining is driven by market forces, there also is insufficient certainty about how much material would be transported each year, much less about whether any truck transport would occur during peak or non-peak hours. Specifics about the myriad possible temporary onsite collection location(s) and method(s) also would be speculative. For example, material may be moved from the point of extraction to the collection location(s) by one or more methods, which could include conveyor or truck. Given the general lack of certainty or definition of an offsite disposal alternative, the County has determined that any analysis of potential environmental impacts would be too speculative for evaluation (see CEQA Guidelines Section 15145).

6.3 Alternatives Analyzed in this EIR

The following alternatives have been evaluated for their feasibility and their ability to achieve the project objectives while avoiding, reducing, or minimizing the potentially significant and unavoidable impacts identified for the project. These alternatives (with the exception of the No-Project Alternative) would meet all of the project objectives. The degree to which these alternatives substantially lower the significant impacts identified for the project is evaluated for each of the resource topics addressed in **Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures***, of this EIR.

6.3.1 Alternative A: No-Project Alternative

Description

Under the No-Project Alternative (Alternative A), the proposed reclamation plan would not be approved and expansion of vested mining to areas outside of the existing reclamation plan boundary would not proceed. Following completion of vested mining within the existing reclamation plan boundary, reclamation in accordance with the existing reclamation plan would be required. Under this alternative, none of the project objectives discussed above would be met.

6.3.2 Alternative B: Partial Backfilling of Pit B

Description

Under the Partial Backfilling of Pit B Alternative (Alternative B) overburden material would be used to backfill a portion of Pit B to an elevation at or above the expected groundwater level. This alternative would ensure that groundwater that collects in the bottom of Pit B, when mined to depth, would not be exposed to the open air, which in turn could prevent or reduce evaporation. This alternative would also result in certain overburden stockpiles being reduced in size or height, which could be a benefit from a visual perspective, although these improvements are expected to be nominal.

While this alternative would have potential benefits related to groundwater quantity compared to the proposed project, backfilling of Pit B would result in additional air and GHG emissions as it would require additional mobile equipment operation to move the material from the nearby stockpiles back into Pit B as part of reclamation. Additional fuel energy would also be consumed by mobile equipment to facilitate backfilling. This increased material movement would also generate additional quantities of fugitive dust compared to the proposed project. Lastly, backfill could also generate additional noise effects due to additional mobile equipment operation in and around Pit B. Alternative B incorporates all mitigation measures recommended for the proposed project in **Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures***.

Impacts

Aesthetics

As described in **Section 4.1, *Aesthetics***, project reclamation would result in revegetation of vested mine areas resulting in a visual benefit of the project as compared to the visual appearance of the mined condition baselines. Partial backfill of Pit B under Alternative B would utilize overburden material from nearby stockpiles reducing the size (height and/or footprint) of one or more overburden stockpiles. Although overburden stockpiles would be created during vested mining operations, the stockpiles and their visibility are not considered impacts of the reclamation project. However, the reduced size of certain stockpiles could be considered a visual benefit of Alternative B as a result of reduced visibility of post-mining stockpiles. Although Alternative B would have the potential to provide some aesthetic benefit as compared to reclaimed conditions under the proposed project, aesthetic impacts of the proposed project are found to be beneficial and Alternative B would not serve to reduce an adverse visual impact of the project.

Agricultural Resources

The project site does not contain agricultural or forest resources and no such resources would be present under baseline conditions following completion of vested mining. Neither vested mining nor reclamation would directly convert farmland to non-agricultural use or convert forest land to non-forest use. Alternative B would result in similar agricultural and forestry resources impacts as those identified for the proposed project.

Air Quality

Alternative B would result in similar air quality impacts as those identified for the project. However, this alternative would result in increased material movement required for placement of material into Pit B, which would be expected to result in a marginal increase in air pollutant emissions as compared to the proposed project.

Biological Resources

Alternative B would require a marginal increase in onsite equipment operation for movement of overburden from stockpile(s) to Pit B. This alternative would not be expected to increase disturbance areas within the project site, however, the marginal increase in equipment operation and movement during partial backfill of Pit B could have a marginal increase in potential for adverse effects on biological resources during backfill placement. The proposed Pit B lake is not anticipated to contribute to disease vectors (chiefly, mosquitos) given the remote area of Pit B, the final topography, and the facility as a whole. However, this Alternative would eliminate the post-reclamation Pit B lake anticipated under the proposed project, and thus, the potential for any mosquitos to breed in the final reclaimed lake condition, which would eliminate any potential impact to humans, livestock, or wildlife.

Cultural Resources

During movement of overburden from stockpile(s) to Pit B, Alternative B would require a marginal increase in onsite equipment operation and disturbance of soils. However, disturbances would be within areas that will have been previously disturbed during vested

mining and this alternative would not be expected to change potential for cultural resources impacts as compared to the proposed project.

Energy

Alternative B would result in similar impacts related to energy as those identified for the project, but with a marginal increase in energy use associated with equipment operation for movement of backfill material to Pit B. This marginal increase in fuel use would not be used inefficiently and would not represent a substantial new or substantial increase in energy impacts as compared to the proposed project.

Geology and Soils

Alternative B would result in similar geology and soils impacts as those identified for the project. Alternative B could provide a marginal benefit associated with stockpile stability associated with the reduction in size of certain stockpile(s) and a marginal benefit associated with slope stability of backfill areas of Pit B; however, this alternative would not avoid or otherwise reduce a significant geology or soils impact.

Greenhouse Gas Emissions

Alternative B would result in similar GHG emission impacts as those identified for the project, but of a slightly greater intensity. This alternative would result in similar cumulative GHG emissions as the proposed project; however, the increased material movement required for placement of material into Pit B would be expected to result in a marginal increase in GHG emissions as compared to the proposed project.

Hazards and Hazardous Materials

Alternative B would result in similar hazards and hazardous materials impacts as those identified for the proposed project.

Hydrology and Water Quality

Alternative B would result in similar hydrology and water quality impacts as those identified for the project, with potential benefits associated with elimination of a Pit B Lake under reclaimed conditions. Alternative B would result in similar impacts related to water use as identified for the project during reclamation activities, with a marginal increase in water use for dust suppression during Pit B partial backfill activities. The elimination of a Pit B Lake under this alternative would reduce or eliminate long-term groundwater evaporation from the Pit B Lake under reclaimed conditions as compared to the proposed project. The aforementioned reduction or elimination of long-term groundwater evaporation is anticipated to more than offset water loss due to the aforementioned marginal increase in water use for dust suppression.

Land Use and Planning

Alternative B would result in similar land use and planning impacts as those identified for the proposed project.

Mineral Resources

Alternative B would result in similar mineral resource impacts as those identified for the proposed project.

Noise

Alternative B would result in similar noise impacts as compared to those identified for the proposed project. Although this alternative would result in a marginal increase in equipment operation associated with partial backfill of Pit B, equipment noise during these activities would not be expected to substantially increase noise at sensitive receptor locations.

Public Services

Alternative B would result in similar public service impacts as those identified for the proposed project.

Transportation

Alternative B would result in similar transportation and traffic impacts as those identified for the project.

Tribal Cultural Resources

Alternative B would result in similar tribal cultural resources impacts as those identified for the project.

Utilities and Service Systems

Alternative B would result in similar utility and services system impacts as those identified for the proposed project.

Wildfire

Alternative B would result in similar wildfire impacts as compared to those identified for the proposed project.

6.3.3 Alternative C: Reduced Traffic Alternative Associated With Increased Reclamation Timeframe

Description

As indicated in **Chapter 3, Project Description**, of this EIR, the demolition crew would demolish the stationary human-made items onsite required to be removed by the Reclamation Plan (including the cement plant), then the salvage crew would sort the material comprising those items (as well as other human-made items onsite not requiring demolition, such as unused wire and pipe) into two categories (waste and recyclables) and transport the material to appropriately permitted facilities for disposal/recycling as applicable. As such, “salvage operations” are defined as the work of the salvage crew as indicated earlier in this paragraph.

Under the Reduced Traffic Alternative associated with Increased Reclamation Timeframe alternative (Alternative C), rather than a two-year reclamation timeframe, reclamation would be complete over a longer three-year timeframe. The primary potential advantage of this

alternative is that the haul truck trips required to transport equipment to/from and material (including the demolished cement plant) from the site would be spread out over a longer period, which would be anticipated to result in fewer average trucks per day traveling on area roadways.

While this alternative would be anticipated to reduce haul truck traffic on a daily basis, it would not reduce the total number of truck trips required to remove the human-made items from the project site (including the demolished cement plant), which means total air and GHG emissions would remain unchanged compared to the project. Conversely, after the demolition crew demolishes the stationary human-made items onsite required to be removed by the proposed Reclamation Plan (including the cement plant), it may require more total truck trips by salvage crew personnel, as salvage crew personnel may not be able to remove material from the project site in as efficient a manner as possible to ensure daily truck trips are arbitrarily limited. Arbitrarily extending the reclamation timeframe also has the potential to create inefficiencies that could require the consumption of additional water or energy resources as compared to the proposed project.

Alternative C further incorporates all mitigation measures recommended for the proposed project in **Chapter 4**, *Environmental Setting, Impacts, and Mitigation Measures*.

Impacts

Aesthetics

Potential visual impacts under Alternative C would be similar to those described for the proposed project. Therefore, visual impacts that would result from Alternative C are considered to be comparable to the proposed project.

Agricultural Resources

The project site does not contain agricultural or forest resources and no such resources would be present under baseline conditions following completion of vested mining. Neither vested mining nor reclamation would directly convert farmland to non-agricultural use or convert forest land to non-forest use. Alternative C would result in similar agricultural and forestry resources impacts as those identified for the proposed project.

Air Quality

Alternative C would result in similar air quality impacts as compared to those identified for the project. Extending the reclamation timeframe to three years under this alternative could result in marginal reductions in daily and annual air pollutant emissions as compared to the proposed project, but the total amount of emissions associated with reclamation would be similar to the proposed project.

Biological Resources

Alternative C would result in similar biological resource impacts as compared to those identified for the proposed project.

Cultural Resources

Alternative C would result in similar cultural resource impacts as compared to those identified for the proposed project.

Energy

Alternative C would result in similar impacts related to energy as compared to those identified for the proposed project. Total energy consumption associated with reclamation would not change, however, energy usage would occur over a three-year period instead of a two-year period as compared to the proposed project.

Geology and Soils

Alternative C would result in similar geology and soils impacts as those identified for the proposed project.

Greenhouse Gas Emissions

Alternative C would result in similar GHG emission impacts as compared to those identified for the project. Extending the reclamation timeframe to three years under this alternative could result in marginal reductions in daily and annual GHG emissions as compared to the proposed project, but the total amount of emissions associated with reclamation would be similar to the proposed project.

Hazards and Hazardous Materials

Alternative C would result in similar hazards and hazardous materials impacts as those identified for the proposed project.

Hydrology and Water Quality

Alternative C would result in similar hydrology and water quality impacts as those identified for the proposed project.

Land Use and Planning

Alternative C would result in similar land use and planning impacts as those identified for the proposed project.

Mineral Resources

Alternative C would result in similar mineral resource impacts as those identified for the proposed project.

Noise

Alternative C would result in similar noise impacts as those identified for the proposed project; however, noise generated during reclamation under Alternative C would occur over a three year period as compared to two years under the proposed project.

Public Services

Alternative C would result in similar public services impacts as those identified for the proposed project.

Transportation

Alternative C would result in similar transportation and traffic impacts as compared to those identified for the project. However, under this alternative vehicle trips associated with-hauling human-made items (including the demolished cement plant) offsite would be performed over a three-year period as compared to a two-year period under the proposed project. The extended period under this alternative could reduce annual average material haul trips by approximately one-third as compared to the proposed project.

Tribal Cultural Resources

Alternative C would result in similar tribal cultural resources impacts as compared to those identified for the proposed project.

Utilities and Service Systems

Alternative C would result in similar utility and service systems impacts as compared to those identified for the proposed project.

Wildfire

Alternative C would result in similar wildfire impacts as compared to those identified for the proposed project.

6.4 Summary of Alternatives Comparison

Table 6-1, *Alternatives Impact Comparison Summary*, compares the relative degree of potential environmental impacts of each of the alternatives with the proposed project.

Table 6-1 Alternatives Impact Comparison Summary

Resource Area	Alternative A (No Project)	Alternative B (Partial Backfilling of Pit B)	Alternative C (Reduced Traffic Alternative associated with Increased Reclamation Timeframe)
Aesthetics	-	-	=
Agricultural and Forestry Resources	=	=	=
Air Quality	-	+	=
Biological Resources	-	+	=
Cultural Resources	-	=	=
Energy	-	+	=
Geology and Soils	-	=	=
Greenhouse Gas Emissions	-	+	=
Hazards and Hazardous Materials	-	=	=

Table 6-1 Alternatives Impact Comparison Summary

Resource Area	Alternative A (No Project)	Alternative B (Partial Backfilling of Pit B)	Alternative C (Reduced Traffic Alternative associated with Increased Reclamation Timeframe)
Hydrology and Water Quality	-	-	=
Land Use and Planning	-	=	=
Mineral Resources	-	=	=
Noise	-	+	=
Public Services	-	=	=
Transportation	-	=	-
Tribal Cultural Resources	-	=	=
Utilities and Service Systems	-	=	=
Wildfire	-	=	=

Notes:

“-” = impact is less than proposed project

“+” = impact is greater than proposed project

“=” = impact is same as the proposed project

6.5 Environmentally Superior Alternative

An EIR must identify the environmentally superior alternative to the proposed project. Alternative A, the No-Project Alternative, is environmentally superior to the proposed project and would not result in the physical environmental impacts identified for the proposed project. However, the No-Project Alternative would not meet any of the objectives of the proposed project. Under State CEQA *Guidelines* Section 15126.6(e)(2), if the environmentally superior alternative is the No-Project Alternative, then an environmentally superior alternative must be identified among the other alternatives.

As described above, Alternative B (Partial Backfilling of Pit B) would reduce environmental impacts related to long-term groundwater loss through evaporation and could also result in marginal benefits associated with aesthetics, and hydrology and water quality. However, Alternative B would also be expected to result in marginally increased impacts associated with air quality, biological resources, energy, greenhouse gas emissions, and noise compared to the proposed project.

Alternative B would be a feasible alternative that meets all of the project objectives while reducing potential impacts of the proposed project associated with long-term groundwater loss through evaporation. Alternative B, Partial Backfilling of Pit B, is therefore considered to be the environmentally superior alternative for the purposes of this analysis.

Chapter 7

Response to Comments

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Chapter 7

Response to Comments

This chapter is being reserved for, and will be included with, the Final EIR.

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Chapter 8

Organizations and Persons Consulted

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Organizations and Persons Consulted

8.1 Federal

China Lake Naval Weapons Center

Edwards Air Force Base, Mission Sustainability Liaison

United States Air Force

United States Army

United States Bureau of Land Management (Ridgecrest Field Office)

United States Department of Agriculture, Natural Resources Conservation Service

United States Environmental Protection Agency Region IX Office

United States Fish and Wildlife Service

United States Marine Corps

United States Mine Safety and Health Administration

United States Navy

United States Postal Service

8.2 State of California

California Air Resources Board

California Regional Water Quality Control Board, Lahontan Region

California State University, Bakersfield – Library

California Department of Conservation, Director's Office

California Department of Conservation, Geologic Energy Management Division

California Department of Conservation, Department of Resources, Recycling & Recovery

California Department of Conservation, Division of Land Resource Protection

California Department of Conservation, Division of Mine Reclamation

California Department of Fish and Wildlife

California Department of Industrial Relations – Mining and Tunneling

California Department of Transportation District 06

California Department of Transportation District 09

California State Mining and Geology Board

California Native American Heritage Commission

California Office of the State Geologist

California State Clearinghouse

8.3 Regional and Local

Adams, Broadwell, Joseph & Cardozo

Antelope Valley-East Kern Water Agency

AT&T California

Benchmark Resources

California City Planning Department

California Resources Petroleum Corporation

CalPortland Company

Center on Race, Poverty & the Environmental/CA Rural Legal Assistance Foundation

Chumash Council of Bakersfield

City of Arvin

City of Bakersfield Planning Department

City of Bakersfield Public Works Department

City of Delano Planning Department

City of Maricopa

City of McFarland

City of Ridgecrest

City of Shafter

City of Taft

City of Tehachapi

City of Wasco

County of Ventura Resource Management Agency, Planning Division

David Laughing Horse Robinson

Defenders of Wildlife

Eastern Kern Air Pollution Control District

Eastern Kern Resource Conservation District

Golden Hills Community Service District

Harrison, Temblador, Hungerford, & Guernsey

Inyo County Planning Department

Kern Audubon Society

Kern County Administrative Officer

Kern County Environmental Health Services Department

Kern County Fire Department

Kern County Library, Beal

Kern County Library, Beal Local History Room

Kern County Library, Tehachapi Branch

Kern County Parks & Recreation

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

Kern County Public Works Department/Building & Development/Floodplain

Kern County Public Works Department/Building & Development/Survey

Kern County Public Works Department/Buildings & Development/Code Compliance

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

Kern County Sheriff's Department, Administration

Kern County Superintendent of Schools

Kern County Water Agency

Kern Local Agency Formation Commission

Kern Valley Indian Council

Kern Valley Indian Council, Historic Preservation Office

Kings County Planning Agency

Kitanemuk & Yowlumne Tejon Indians

LIUNA

Los Angeles County Regional Planning Department

Lozeau Drury LLP

Mojave Chamber of Commerce

Mojave Unified School District

Native American Heritage Council of Kern County

Northcutt and Associates

Pacific Crest Trail Association

Pacific Crest Trail Program Manager

San Bernardino County Planning Department

San Luis Obispo County Planning Department, Planning and Building

Santa Barbara County Resource Management Department

Santa Rosa Rancheria

Sierra Club, Kern Kaweah Chapter

Southern California Edison, Planning Department

Southern California Edison, Third Party Environmental Review

Southern San Joaquin Valley Information Center

Tehachapi-Cummings County Water District

Tehachapi Parks & Recreation District

Tehachapi Resource Conservation District

Tehachapi Unified School District

Tejon Indian Tribe

Tubatulabals of Kern County

Tulare County Planning and Development Department

Tule River Indian Tribe

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Chapter 9

List of Preparers

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Kern County Planning and Natural Resources Department

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Keith Alvidrez – Supervising Planner

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9.2 EIR Preparation Assistance

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Bob Delp – Project Director

Katharina McKillip – Document Processing

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Benchmark Resources

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ECORP Consulting, Inc.

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Krissy Walker-Berry – Senior Biologist

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EMKO Environmental

Andrew Kopania, PH.D. R.G., C.H. – Hydrogeologist

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Chapter 10

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Chapter 10

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Chapter 11

Acronyms and Abbreviations

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Chapter 11

Acronyms and Abbreviations

The following definitions are of acronyms and abbreviations used in the EIR:

~	Approximately
°F	Degrees Fahrenheit
A	Exclusive Agriculture (Zoning District)
A-1	Limited Agriculture
AB	Assembly Bill
ac ft	acre feet
ACI	American Concrete Institute
ADT	Average Daily Trips
AEA	Additional Environmental Analysis
AF	Acre-Feet
AFY	Acre-Feet Per Year
AISC	American Institute of Steel Construction
ALAC	American Lung Association of California
ALUCP	Airport Land Use Compatibility Plan
amsl	Above Mean Sea Level
APCD	Air Pollution Control District
APE	Area of Potential Effects
APN	Assessor's Parcel Number
APS	Alternative Planning Strategy
AQMP	Air Quality Management Plan
ASCE	American Society of Civil Engineers
ASM	ASM Affiliates, Inc.
AST	Above-Ground Storage Tank
ATF	Bureau of Alcohol, Tobacco, Firearms, and Explosives
BAAQMD	Bay Area Quality Management District
BACT	Best Available Control Technology
BAT	Best Available Technology

BAU	Business-As-Usual
BCR	BCR Consulting LLC
BCT	Best Conventional Pollution Control Technology
BGEPA	Bald and Golden Eagle Protection Agency
bgs	Below Ground Surface
BLM	Bureau of Land Management
BMP	Best Management Practice
B.P.	Before Present
CAA	(Federal) Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAD	Computer Aided Drafting
CAFE	Corporate Average Fuel Economy
CAISO	California Independent System Operator
cal A.D.	Calibrated Years Anno Domini
cal B.C.	Calibrated Years Before Christ
CALARP	California Accidental Release Prevention
CalGEM	(California) Geologic Energy Management Division
CAL FIRE	California Department of Forestry and Fire Protection
CalEPA	California Environmental Protection Agency
California OHP	California Office of Historic Preservation
Cal NAGPRA	California Native American Grave Protection and Repatriation Act
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CalGEM	California Department of Conservation Geologic Energy Management Division
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officer's Association
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CCSP	Cameron Canyon Specific Plan

CDC	Center for Disease Control
CDFW	California Department of Fish and Wildlife
CDMG	California Division of Mines and Geology
CDOC	California Department of Conservation
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERCLIS-NFRAP	Comprehensive Environmental Response, Compensation, and Liability Information System-No Further Remedial Action Planned
CERP	Community Emissions Reduction Plan
CERS	California Environmental Reporting System
CESA	California Endangered Species Act
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
cfs	cubic feet per second
CFGC	California Fish and Game Code
CGS	California Geological Survey
CH ₄	Methane
CHL	California Historic Landmark
CHMIRS	California Hazardous Material Incident Reporting System
CHP	California Highway Patrol
CHRIS	California Historical Resources Information Center
CHSRA	California High-Speed Rail Authority
CI	<i>Coccidioides immitis</i>
CIWMB	California Integrated Waste Management Board
CIWQS	California Integrated Water Quality System
CIP	Capital Improvement Plan
CKD	Cement Kiln Dust
CMP	Congestion Management Program
CN	Carbon:Nitrogen
CNDDDB	California Natural Diversity Database

CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COEHHA	California Office of Environmental Health Hazard Assessment
Commission	California Fish and Game Commission
COVID-19	Coronavirus Disease 2019
CPC	CalPortland Company
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSDD	Capital Storm Design Discharge
CSLC	California State Lands Commission
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CVC	California Vehicle Code
CWA	Clean Water Act
CWC	California Water Code
CWPP	CWPP
dB	Decibel
dBA	A-Weighted Decibel
DDW	(California) State Water Resources Control Board's Division of Drinking Water
DEM	Digital Elevation Models
DI	Drilling Island
DMR	(California) Division of Mine Reclamation
DOC	(California) Department of Conservation Department of Conservation
DOSH	(California) Department of Occupational Safety and Health
DPM	Diesel Particulate Matter
DPR	Department of Parks and Recreation
DTSC	(California) Department of Toxic Substances Control

DWR	(California) Department of Water Resources
E	Estate
EIR	Environmental Impact Report
EKAD	East Kern Airport District
EKAPCD	Eastern Kern Air Pollution Control District
EMFAC	Emission Factor (computer model)
EMI/TRIS	Emissions Inventory Data / Toxic Chemical Release Inventory System
EMS	Emergency Medical Services
EO	Executive Order
EPA	(Federal) Environmental Protection Agency
ESA	(Federal) Endangered Species Act
FAA	Federal Aviation Administration
FAM	Financial Assurance Mechanism
FBFM	Flood Boundary Floodway Map
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FICON	Federal Interagency Commission on Noise
FIRM	Flood Insurance Rate Map
FLPMA	Federal Land Policy and Management Act
FMMP	Farmland Mapping and Monitoring Program
FIA	Federal Insurance Administration
FOS	Factor of Safety
FP	Floodplain Combining
FPP	Floodplain Primary
FPPA	Farmland Protection Policy Act
FPS	Floodplain Secondary
FR	Federal Register
FRAP	Fire and Resource Assessment Program
ft	feet
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
FVGB	Freemont Valley Groundwater Basin

GAMA	Groundwater Ambient Monitoring and Assessment Program
GHG	Greenhouse Gas
GHGRP	Greenhouse Gas Reporting Program
GLO	General Land Office
GWh	Gigawatt Hour
GIS	Geographic Information System
gpm	Gallons per Minute
GPS	Global Positioning System
gr	Mesozoic Intrusive Granite Rocks
GSP	Groundwater Sustainability Plan
GW	Gigawatt
GWh	Gigawatt-hours
GWP	Global Warming Potential
H ₂ S	Hydrogen Sulfide
h:v	horizontal:vertical
HAP	Hazardous Air Pollutant
HASP	Health and Safety Plan
HAZMAT	Hazardous Materials
HAZNET	Hazardous Waste Information System
HDV	Heavy-Duty Vehicle
HFC	Hydrofluorocarbon
HMBP	Hazardous Material Business Plan
HRA	Health Risk Assessment
HSC	Health and Safety Code
HSR	High Speed Rail
HSWA	Hazardous and Solid Waste Act
HVAC	Heating Ventilation and Air Conditioning
HWCA	(California) Hazardous Waste Control Act
Hz	Hertz
I-5	(U.S.) Interstate 5
IBC	International Building Code
ICS	International Commission on Stratigraphy

IPCC	Intergovernmental Panel on Climate Change
ITP	Incidental Take Permit
ITS	Institute of Transportation Studies
ISDD	Intermediate Storm Design Discharge
IWV	Indian Wells Valley
KCFD	Kern County Fire Department
KCGP	Kern County General Plan
KCSO	Kern County Sheriff's Office
KCWA	Kern County Water Agency
Kern COG	Kern Council of Governments
km	Kilometers
KOP	Key Observation Point
KR/CV	Kern River/Cummings Valley
kWh	Kilowatt-Hour
LACFD	Los Angeles County Fire Department
LCFS	Low-Carbon Fuel Standard
LCI	(California) Governor's Office of Land Use and Climate Innovation
Ldn	Day–Night Average Sound Level
LDS	Land Disposal Sites
LDV	Light-Duty Vehicle
Leq	Equivalent Sound Pressure Level
LEV	Low Emission Vehicle
LID	Low Impact Development
LOS	Level of Service
LRA	Local Responsibility Area
LSA	Lake and Streambed Alteration
LSAA	Lake and Streambed Alteration Agreement
M-3	Heavy Industrial
MBTA	Migratory Bird Treaty Act
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MDV	Medium-Duty Vehicle

MEIR	Maximally Exposed Individual Resident
mg/L	Milligrams per Liter
mg/m ³	Milligrams per Cubic Meter
µg/m ³	Micrograms per Cubic Meter
MINES	Mines Master Index File
mm	Millimeter
Mm-1	Inverse Megameter
MM	Mitigation Measure
MMMP	Mitigation Measure Monitoring Program
MMT	Million Metric Tons
MMTCO _{2e}	Million Metric Tons of Carbon Dioxide Equivalent
MND	Mitigated Negative Declaration
Montreal Protocol	Montreal Protocol on Substances that Deplete the Ozone Layer
MOU	Memorandum of Understanding
mph	Miles Per Hour
MPOs	Metropolitan Planning Organizations
MRZ	Mineral Resource Zone
MSHA	(Federal) Mine Safety and Health Administration
MTCO _{2e}	Metric Tons of Carbon Dioxide Equivalent
MMTCO _{2e}	Million Metric Tons of Carbon Dioxide Equivalent
MW	Megawatt
MWh	Megawatt Hour
N/A	Not Applicable
N ₂ O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCP	National Contingency Plan
NEHRP	National Earthquake Hazards Reduction Program
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFRAP	No Further Remedial Actions Planned
NFIP	National Flood Insurance Program

NFPA	National Fire Protection Association
NHTSA	(U.S. Department of Transportation) National Highway Traffic and Safety Administration
NHPA	National Historic Preservation Act
NOC	Notice of Completion
NIOSH	National Institute for Occupational Safety and Health
NO ₂	Nitrogen Dioxide
NO ₃	Nitrate
NO _x	Nitrogen Oxides
NOAA Fisheries	National Oceanic and Atmospheric Administration National Marine Fisheries Service
NOC	Notice of Completion
NOP	Notice of Preparation
NONA	Notice of Non-Applicability
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPS	National Park Service
NPPA	(California) Native Plant Protection Act
NR	Natural Resource
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSR	New & Modified Stationary Source Review
NSHM	National Seismic Hazard Model
NWS	National Weather Service
O ₃	Ozone
OEHHA	(California) Office of Environmental Health Hazard Assessment
OES	(California) Office of Emergency Services
OGV	Ocean-Going Vessels
OHV	Off-Highway Vehicle
OHW	Ordinary High Water
OHWM	Ordinary High Water Mark
OPR	(California) Governor's Office of Planning and Research (former)
OSHA	Occupational Safety and Health Administration
PAH	Polycyclic Aromatic Hydrocarbons

Pb	Lead
PCT	Pacific Crest Trail
PD	Precise Development
PE	Petroleum Extraction
PFC	Perfluorocarbon
PGA	Peak Ground Acceleration
PG&E	Pacific Gas and Electric Company
PHEV	Plug-In Hybrid Electric Vehicles
PHI	Points of Historical Interest
pKm	Paleozoic Metasedimentary Rocks
PM ₁₀	Particulate Matter less than 10 Microns in Aerodynamic Diameter
PM _{2.5}	Particulate Matter less than 2.5 Microns in Aerodynamic Diameter
PMI	Point of Maximum Impact
Porter Cologne Act	(California) Porter-Cologne Water Quality Control Act
ppb	Parts Per Billion
ppm	Parts Per Million
PPV	Peak Particle Velocity
PRC	(California) Public Resources Code
Project	Mojave Life of Mine Reclamation Plan Amendment Project
PST	Pacific Standard Time
PVC	Polyvinyl Chloride
R13W	Range 13 West
RACM	Reasonably Available Control Measures
Rapanos	<i>Rapanos v. United States</i> , 547 U.S. 715 (2006)
RCRA	Resource Conservation and Recovery Act of 1976
REL	Reference Exposure Level
RH	Relative Humidity
RHNA	Regional Housing Needs Allocation
RMS	Root-Mean-Squared
ROG	Reactive Organic Gases
RPS	Renewable Portfolio Standard
RS	Residential Suburban

RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWD	Report of Waste Discharge
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SBB&M	San Bernardino Base and Meridian
SC	Scenic Corridor
SCE	Southern California Edison
SCS	Sustainable Community Strategy
SCE	Southern California Edison
Scoping Plan	CARB 2022 Climate Change Scoping Plan
SCS	Sustainable Communities Strategy
SDC	Seismic Design Category
SDG&E	San Deigo Gas and Electric
SF ₆	Sulfur Hexafluoride
SGMA	Sustainable Groundwater management Act of 2014
SHPO	State Historic Preservation Officer
SHRC	State Historic Resources Commission
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SMARA	Surface Mining and Reclamation Act of 1975
SMGB	State Mining and Geology Board
SO ₂	Sulfur Dioxide
SO ₄	Sulfate
SoCalGas	Southern California Gas Company
SO _x	Sulfur Oxides
SoCalGas	Southern California Gas Company
SPCC	Spill Prevention, Control, and Countermeasure
SR	State Route

SRA	State Responsibility Area
SSC	(California) Species of Special Concern
SSJVIC	Southern San Joaquin Valley Information Center
SVP	Society of Vertebrate Paleontology
SWANCC	<i>Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers</i> , 531 U.S. 159 (2001)
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
T11N	Township 11 North
TAC	Toxic Air Contaminant
TCCWD	Tehachapi-Cummings County Water District
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TOC	Top of Casing
TP/EH	Terminal Pleistocene/Early Holocene
tpy	Tons Per Year
UNFCCC	United Nations Framework Convention on Climate Change
USC	United States Code
UBC	Uniform Building Code
UFC	Uniform Fire Code
UP	Union Pacific Railroad
UPC	Uniform Plumbing Code
URF	Unit Risk Factors
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
UV	Ultraviolet

UWMP	Urban Water Management Plan
VDT	Video Display Terminal
VFCE	Valley Fever Center for Excellence
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
VRP	Visibility-Reducing Particles
W	Watts
WDR	Waste Discharge Requirements
WE	Wind Energy
Wh	Watt Hours
WJTCA	Western Joshua Tree Conservation Act
WQO	Water Quality Order
WRCC	Western Regional Climate Center
WSA	Water Supply Assessment
WUI	Wildland-Urban Interface
ZEV	Zero Emission Vehicle

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