

Draft Environmental Impact Report

SCH# 2020069034

**Volume 1
Chapters 1 through 11**

**Clean Harbors WMU Solid Waste Disposal Facility
By Clean Harbors Buttonwillow, LLC**

**GPA No. 7, Map 97
Zone Change No. 2, Map 97
Modification to CUP No. 4, Map 97
Exclusion from Agricultural Preserve No. 2 (PP17117)**



Kern County
Planning and Natural Resources Department
Bakersfield, California

March 2024

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Bakersfield, CA 93301-2323
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**PLANNING AND NATURAL
RESOURCES DEPARTMENT**

Planning
Community Development
Administrative Operations

**NOTICE OF AVAILABILITY FOR PUBLIC REVIEW AND HEARING ON
THE DRAFT ENVIRONMENTAL IMPACT REPORT
FOR THE PROPOSED CLEAN HARBORS WMU 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: Clean Harbors WMU Solid Waste Disposal Facility, by Clean Harbors Buttonwillow, GPA No. 7, Map 97; Zone Change No. 2, Map 97; Modification to CUP No. 4, Map 97; Exclusion from Agricultural Preserve No. 2 (PP17117)

PROJECT LOCATION: The project site is located in central Kern County at 2500 West Lokern Road, approximately 8 miles west of unincorporated community of Buttonwillow. The project site is located in Sections 15 and Section 16 of Township 29 South, Range 22 East, of the Mount Diablo Base and Meridian (MDB&M).

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

<https://kernplanning.com/planning/environmental-doc/clean-harbors-wmu>

PUBLIC WORKSHOP: The Kern County Planning and Natural Resources staff and the California Department of Toxic Substances Control (DTSC) staff will jointly present a public workshop to present the Draft EIR and DTSC permitting process to provide an opportunity for comments. Spanish translation will be provided for the workshop.

Buttonwillow Workshop – April 30th, 2024 at 5:00 – 7:00 pm

Buttonwillow Recreation and Park District Community Center
556 Milo Ave
Buttonwillow, CA 93206

**AMERICANS WITH DISABILITIES ACT
(Government Code Section 54953.2)**

Disabled individuals who need special assistance to attend or participate in a Kern County Planning and Natural Resources virtual workshop may request assistance at the Kern County Planning and Natural Resources Department, 2700 "M" Street, Suite 100, Bakersfield, California 93301, or by calling Janice Mayes at (661) 862-8793. Every effort will be made to reasonably accommodate individuals with disabilities by making meeting materials available in alternative formats. Requests for assistance should be made five (5) working days in advance whenever possible.

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

March 28, 2024 – May 13, 2024

WRITTEN COMMENTS may be submitted to the project planner identified below prior to the close of the DEIR public review period on May 13, 2024, at 5:00 p.m. to:

Kern County Planning and Natural Resources Department
ATTN: Janice Mayes, Planner III
2700 “M” Street, Suite 100, Bakersfield, CA 93301
Phone: (661) 862-5015
E-mail: mavesj@kerncounty.com

PUBLIC HEARING: A public hearing has been scheduled with the Kern County Planning Commission to consider a recommendation on the 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 11, 2024
TIME: 7:00 P.M. or soon thereafter
LOCATION: Chambers of the Board of Supervisors
Kern County Administrative Center, First Floor
1115 Truxtun Avenue, Bakersfield, CA 93301

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

ASSISTANCE: If you have any **questions** about the proposed project or issues accessing the document, please contact the project planner directly:

Kern County Planning and Natural Resources Department
ATTN: Janice Mayes, Planner III
2700 “M” Street, Suite 100, Bakersfield, CA 93301
Phone: (661) 862-5015
E-mail: mavesj@kerncounty.com

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 Clean Harbors Buttonwillow Facility is an existing commercial waste management facility that accepts solid, semi-solid, and liquid, hazardous and non-hazardous wastes for treatment, storage, or disposal.

The proposed project includes Kern County’s modification of existing land use authorizations to include an expanded permitted disposal area to facilitate the construction and operation of additional non-hazardous waste landfill units and an expanded permitted facility area to accommodate a soil stockpiles area; increases to non-hazardous waste truck traffic; increases to non-hazardous waste permitted disposal capacity; and construction and operation of a latex paint recycling building. In addition, the project proponent has submitted a renewal application to DTSC for renewal of the existing Hazardous Waste Facility Permit with modifications. The proposed modifications to the existing hazard waste facility permit include administrative and operational changes to existing hazardous waste units, new hazardous waste treatment buildings, a new container storage pad area, and addition of environmental monitoring programs.

Land use authorizations for the facility were originally approved by the Kern County Board of Supervisors in 1982. Modifications to Conditional Use Permit (CUP) 4 were approved on December 12, 1994, November 30, 2004, July 13, 2010, and December 16, 2014 by both the Kern County Planning Commission and Kern County Board of Supervisors.

Kern County’s proposed authorization specifically includes:

1. Amendment to the Land Use, Open Space, and Conservation Element of the Kern County General Plan from Map Code 8.3 (Extensive Agriculture, 20 min acres) to Map Code 3.4 (Solid Waste Disposal Facility) for approximately 320-acres (on parcel 099-251-32) and Amendment to the Kern County General Plan Appendix “E” Map “Petroleum Waste Management” to show the current “Clean Harbors” name and revised permitted facility boundary, with designated buffer property area (GPA No. 7, Map 97);
2. Change in Zone Classification e from A (Exclusive Agriculture) to M-3 (Heavy Industrial), or a more restrictive

- district, on 640 acres (parcels 099-290-17 and 099-251-32) (ZCC No. 2, Map 97);
3. Petition for exclusion from Agricultural Preserve No. 2 for approximately 640 acres; and
 4. Modification to Conditional Use Permit No.4, Map 97 to include:
 - a. an increase in the permitted facility boundary from 320 acres to 640 acres to include the expansion parcel for a soil stockpile area;
 - b. an increase in permitted disposal area from 160 acres to 193.3 acres for the addition of non-hazardous waste landfill units (WMU 36, 37, 38) within existing facility boundary;
 - c. an increase in permitted disposal capacity from 13,250,000 cubic yards to 16,674,000 for the addition of non-hazardous waste landfill units (WMUs 36, 37, 38) within existing facility boundary;
 - d. construction of four new hazardous waste treatment buildings (tank treatment buildings) to support modifications proposed in a Hazardous Waste Facility Permit renewal application; and
 - e. construction of one latex paint recycling building.

The facility was granted a Hazardous Waste Facility Permit by DTSC and the U.S. Environmental Protection Agency (EPA) in May 1983 and October 1984, respectively. The Hazardous Waste Facility Permit was renewed in 1996. On April 6, 2006, the DTSC Hazardous Waste Facility Permit expired but is continued in accordance with regulatory requirements. Clean Harbors Buttonwillow, LLC has submitted a Hazardous Waste Facility Permit renewal application to DTSC. DTSC is currently performing a technical review of the permit renewal application. The facility continues to operate in accordance with the existing Hazardous Waste Facility Permit.

While the Hazardous Waste Facility permit renewal application does not include an increase in the hazardous waste capacity, the scope of the proposed permit includes renewed authorization for existing facilities and operations, with the following modifications:

1. Reclassification of four existing tank units to miscellaneous units;
2. Construction and operation of four new buildings where treatment is conducted (tank treatment buildings) within the existing facility and reorganizing operations to use the new tank treatment buildings, including the construction of a new bulk container storage pad area for waste that is pending verifications; and
3. Addition of environmental monitoring programs consistent with current regulatory standards.

ENVIRONMENTAL REVIEW FINDINGS: Anticipated significant and unavoidable impacts on Air Quality (Project and Cumulative)

SPANISH TRANSLATION of this Notice of Availability is provided as a courtesy on the DTSC website:

TRADUCCIÓN EN ESPAÑOL

https://www.envirostor.dtsc.ca.gov/public/hwmp_profile_report.asp?global_id=CAD980675276

LORELEI H. OVIATT, AICP, Director
Planning and Natural Resources Department

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

THE BAKERSFIELD CALIFORNIAN

JKM (3/28/24)

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

**Clean Harbors Buttonwillow
Agency Notification List**

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

Bakersfield City Planning Dept
1715 Chester Avenue
Bakersfield, CA 93301

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

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

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

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

City of McFarland
401 West Kern Avenue
McFarland, CA 93250

City of Ridgecrest
100 West California Avenue
Ridgecrest, CA 93555

City of Shafter
336 Pacific Avenue
Shafter, CA 93263

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

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

City of Wasco
764 E Street
Wasco, CA 93280

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

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

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

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

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

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

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

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

U.S. Bureau of Land Management
Caliente/Bakersfield
35126 McMurtrey Avenue
Bakersfield, CA 93308

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

North West Kern Resource Cons Dist
5080 California Avenue, Suite 150
Bakersfield, CA 93309

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

U.S. Army Corps of Engineers
P.O. Box 997
Lake Isabella, CA 93240

U.S. Army Corps of Engineers
Regulatory Division
1325 "J" Street, #1350
Sacramento, CA 95814-2920

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

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

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

Office of the State Geologist
Headquarters
801 "K" Street, MS 12-30
Sacramento, CA 95814

State Dept of Conservation
Office of Land Conservation
801 "K" Street, MS 18-01
Sacramento, CA 95814

State Dept of Conservation
Office of Mine Reclamation
801 "K" Street MS 09-06
Sacramento, CA 95814-3529

State Dept of Conservation
Div Recycling Cert. Sec.
801 "K" Street, MS 19-01
Sacramento, CA 95814

State Mining and Geology Board
801 K Street, MS 20-15
Sacramento, CA 95814

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

California Energy Commission
James W. Reed, Jr.
1516 Ninth Street
Mail Stop 17
Sacramento, CA 95814

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

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

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

State Office of Historical Pres
Attention Susan Stratton
P.O. Box 942896
Sacramento, CA 95296-0001

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

State Water Resources Control Board
Division of Drinking Water
Attn: Jesse Dhaliwal, Sr. Sanitary Eng
4925 Commerce Drive, Suite 120
Bakersfield, CA 93309

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

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

State Lands Commission
100 Howe Avenue, Ste 100-South
Sacramento, CA 95825-8202

State Dept of Toxic Substance Control
Environmental Protection Agency
1515 Tollhouse Road
Clovis, CA 93612

Cal Environmental Protection Agency/
Dept of Toxic Substances Control, Reg 1
Attn: Dave Kereazis, Permit Div - CEQA
8800 Cal Center Drive, 2nd Floor
Sacramento, CA 95826

State Dept of Water Resources
Div. Land & Right-of-Way
P.O. Box 942836
Sacramento, CA 94236

Kern County
Agriculture Department

Kern County Administrative Officer

Kern County Public Works Department/
Building & Development/Floodplain

Kern County Public Works Department/
Building & Development/Survey

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

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

Kern County Fire Dept
Cary Wright, Fire Marshall

Kern County Library
Buttonwillow Branch
116 Buttonwillow Avenue
Buttonwillow, CA 93206

Kern County Library/Beale
Local History Room

Kern County Library/Beale
Andie Sullivan

Kern County Museum
3801 Chester Avenue
Bakersfield, CA 93301

Kern County Parks & Recreation

Kern County Sheriff's Dept
Administration

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

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

Buttonwillow Union School Dist
42600 Highway 58
Buttonwillow, CA 93206

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

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

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

Belridge Water Storage Dist
21908 Seventh Standard Road
McKittrick, CA 93251

Rosedale-Rio Bravo Water Dist
849 Allen Road
Bakersfield, CA 93314

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

Buttonwillow Rec & Parks Dist
P.O. Box 434
Buttonwillow, CA 93206-9320

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

Kern Mosquito Abatement Dist
4705 Allen Road
Bakersfield, CA 93314

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

Kern Audubon Society
Attn: Frank Bedard, Chairman
4124 Chardonnay Drive
Bakersfield, CA 93306

Los Angeles Audubon
926 Citrus Avenue
Los Angeles, CA 90036-4929

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

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

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

California Farm Bureau
2300 River Plaza Drive, NRED
Sacramento, CA 95833

Nature Conservancy West Reg Office
201 Mission Street, 4th Floor
San Francisco, CA 94105

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

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

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

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

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

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

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

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

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

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

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The Gorman Law Firm
1346 E. Walnut Street, Suite 220
Pasadena, CA 91106

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San Diego, CA 92130-3025

Renewal Resources Group
Holding Company
Rupal Patel
113 South La Brea Avenue, 3rd Floor
Los Angeles, CA 90036

David Walsh
22941 Banducci Road
Tehachapi, CA 93561

Congentrix Sunshine, LLC
Rick Neff
9405 Arrowpoint Blvd
Charlotte, NC 28273

Fotowatio Renewable Ventures
Sean Kiernan
44 Montgomery Street, Suite 2200
San Francisco, CA 94104

EDP Renewables Company
North America, LLC
53 SW Yamhill Street
Portland, OR 97204

Kevin Johnston
2476 Buena Vista Avenue
Livermore, CA 94550

Structure Cast
Larry Turpin, Precast Sales Manager
8261 McCutchen Road
Bakersfield, CA 93311

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

Wind Stream, LLC
Albert Davies
1275 - 4th Street, No. 107
Santa Rosa, CA 95404

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1095 Ave of the Americas – FL 25, Ste A
New York, NY 10036-6797

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Palm Springs, CA 92263-2190

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1939 Harrison Street, Suite 150
Oakland, CA 94612

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Renewal Dev, T&D Intercon
77 Beal Street, Room 5361
San Francisco, CA 94105

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Portland, OR 97209

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Iberdrola Renewables, Sr Proj Mgr
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Portland, OR 97209

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Seth Israel
300 California Street, 8th Floor
San Francisco, CA 94101-1407

Kate Kelly
Kelly Group
P.O. Box 868
Winters, CA 95694

Carol Lawhon
Association Executive, IOM
Tehachapi Area Assoc of Realtors
803 Tucker Road
Tehachapi, CA 93561

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

Tejon Indian Tribe
Octavio Escobedo III, Chairman
P.O. Box 640
Arvin, CA 93203

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

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

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

COMMENTORS

Christine Karl, Environment Scientist
Cal Recycle - Department of
Resources Recycling and Recovery
1001 "I" Street
Sacramento, CA 95814

Westside Water Authority
5555 California Ave, Suite 209
Bakersfield, CA 93309

099 160 21 00 8
AERA ENERGY LLC
P O BOX 11164
BAKERSFIELD CA 93389-1164

099 160 11 00 9
BIGGS EDWARD ALAN
PO BOX 77816
SEATTLE WA 98177-0816

099 160 14 00 8
CABRAL ANNETTE MARIE
13060 VALLEY SPRINGS RD
RENO NV 89511

099 160 20 00 5
CLEAN HARBORS
BUTTONWILLOW LLC
P O BOX 92108
AUSTIN TX 78709

099 160 18 00 0
HAND MICHAEL ET AL
P O BOX 749
RAMAH NM 87321

099 230 35 00 9
NAHABEDIAN EXPLORATION
GROUP LLC (THE)
420 BRYANT CI STE D
OJAI CA 93023-4209

099 160 04 00 9
SCHUSTER LAUREL L REV LIV
TRUST
4616 SIERRA DR
HONOLULU HI 96816

099 230 09 00 4
STARRH & STARRH COTTON
GROWERS LP
PO BOX 1537
SHAFTER CA 93263-1537

099 160 07 01 7
WEBER JEANNE E
5320 SILVER STRAND WY
SACRAMENTO CA 95841

099 160 10 00 6
ANA PROPERTIES LLC
P O BOX 1510
LA MIRADA CA 90637

099 180 35 00 5
BOYDSTUN JOHN E &
MARGARET A REV TRUST
326 CHESTER AV
BAKERSFIELD CA 93301-5447

099 261 18 00 6
CENTER FOR NATURAL LANDS
MANAGEMENT INC
27258 VIA INDUSTRIA # B
TEMECULA CA 92590-3751

099 160 17 00 7
COZZENS PROPERTIES LLC
14096 RESERVATION RD
SALINAS CA 93908-9208

099 160 05 00 2
J D LOOMIS INVESTMENTS
LLC
7100 LOCH LOMOND DR
BETHESDA MD 20817

099 180 19 00 9
PERFECTION FOODS FOR
HUNGY INC
P O BOX 25608
PHOENIX AZ 85002-5608

099 160 06 00 5
SIMON WASFY & FAEZA
2831 COUNTRYWOOD LN
WEST COVINA CA 91791-3743

099 160 01 01 9
STATE OF CALIFORNIA
1807 13TH ST STE 103
SACRAMENTO CA 95814-7117

099 160 15 01 0
YEKUYEKU PROP INC
714 EASTER ST
BAKERSFIELD CA 93307

099 180 21 00 4
ANDRES ROBERT CARDONA
99-149 KULINA ST
AIEA HI 96701

099 160 09 00 4
BRANDT HELENE M
2414 REDWOOD RD
NAPA CA 94558-3104

099 261 20 00 1
CHEVRON USA INC
P O BOX 1392
BAKERSFIELD CA 93302-1392

099 160 03 00 6
FABIAN MICHAEL H &
LUCINDA S
4706 DOVERCOURT CI
CARMICHAEL CA 95608

099 160 13 00 5
MARQUEZ MA AURORA S
611 ST FRANCIS BL
DALY CITY CA 94015

099 160 07 02 6
REHBOCK ELNA & JOHNSON
LEONARD
3205 ADELAIDE WY
BELMONT CA 94002

099 180 20 00 1
SKILLED MAKEOVER LLC
18565 SOLEDAD CANYON RD #
147
CANYON COUNTRY CA 91351

099 180 36 00 8
STATE OF CALIFORNIA
PO BOX 944209
SACRAMENTO CA 94244-2090

Buttonwillow Community Foundation
PO BOX 874,
Buttonwillow, CA 93206-0874

Congressman Jim Costa
United States Congress, 21st District
United States House of Representatives
2440 Tulare Street, Suite 420
Fresno CA 93721

Senator Dianne Feinstein
United States Senate, State Office
2500 Tulare Street, Suite 4290
Fresno CA 93721

Senator Alex Padilla
United States Senate
State Office
2500 Tulare Street, Suite 5290
Fresno, CA 93721

Congressman Kevin McCarthy
United States Congress, 20th District
United States House of Representatives
4100 Empire Drive, Suite 150
Bakersfield CA 93309
Manuel Lopez, Public Participation
Specialist
DTSC
9211 Oakdale Avenue
Chatsworth CA 91311

Senator Shannon Grove
CA. State Senator, 12th District
California State Senate
5701 Truxtun Ave. Suite 150
Bakersfield CA 93309
Assembly Member Dr. Jasmeet Bains
CA State Assembly, 35th District
California State Assembly
1430 Truxtun Avenue, Suite 803
Bakersfield, CA 93301

Assembly Member, Devon Mathis CA
State Assembly, 33rd District California
State Assembly
100 West Willow Street Suite 405
Visalia CA 93291

Dennis Palla, Concerned Farmer and
Involved Community Member
12217 Aprilann Avenue
Bakersfield CA 93206

Gloria Selvidge
Involved Community Member
19400 WILDWOOD RD
Buttonwillow CA 93206

Christina Ortega,
Nurse Practitioner
Buttonwillow Health Center
860 CORN CAMP RD
Buttonwillow CA 93206

Alvaro Nunez, Businessman
Buttonwillow Tire Services
228 Highway 58
Buttonwillow CA 93206

Dianna Parson, Involved Community
Member
Buttonwillow Foundation
605 Berkeley Road
Buttonwillow CA 93206

Regina Houchin, President
Buttonwillow Foundation
289 Main Street
Buttonwillow CA 93206

David Hampton, Engineer
Buena Vista Water Storage District
P.O. Box 756
Buttonwillow CA 93206

Rev. Carlos Serrano
St. Mary's Catholic Church
440 N. Main Street
Buttonwillow CA 93206

Bill Quinn
CA Council for Environmental &
Economic Balance
101 Mission Street, Suite 1440
San Francisco CA 94105

Jane Williams
California Communities Against
Toxics
PO Box 845
Rosamond CA 93560

Dr. Joseph K. Lyou
Coalition for Clean Air
617 West 7th, Suite 300
Los Angeles CA 90012
Senator Shannon Grove
CA. State Senator, 12th District
California State Senate
State Capitol, Room 305
Sacramento CA 95814

Robina Suwol
California Safe Schools
PO Box 2756
Toluca Lake CA 91610
Isabelle Zamora, Representative
Office of Supervisor David Couch
1115 Truxtun Avenue 5th Floor
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Notice of Completion & Environmental Document Transmittal

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

SCH # 2020069034

Project Title: Clean Harbors WMU Solid Waste Disposal Facility by Clean Harbors Buttonwillow, LLC
Lead Agency: Kern County Planning and Natural Resources Department Contact Person: Janice Mayes
Mailing Address: 2700 "M" Street Suite 100 Phone: (661) 862-8793
City: Bakersfield Zip: 93301-2323 County: Kern

Project Location: County: Kern City/Nearest Community: McKittrick; Buttonwillow; and South Belridge
Cross Streets Zip Code: 93206
Lat. / Long.: 35° 24' 20" N / 119° 36' 25" W Total Acres: 320 + 320 = 640 acres
Assessor's Parcel No.: 099-290-17 and 099-261-32 Sections: 15 & 16 Twp.: 29S Range: 22E Base: MDB&M
Within 2 Miles: State Hwy #: I5; 33, 46, and 58 Waterways: California Aqueduct
Airports: Elk Hills/Buttonwillow Railways: Union Pacific Railroad Co. Schools:

Document

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

Local Action Type:

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

Development Type:

[] Residential: Units Acres [] Water Facilities: Type MGD
[] Office: Sq.ft. Acres Employees [] Transportation: Type
[] Commercial: Sq.ft. Acres Employees [] Mining: Mineral
[] Industrial: Sq.ft. Acres Employees [] Power: Type MW
[] Educational [x] Waste Treatment: Type Solid Waste MGD
[] Recreational [x] Hazardous Waste: Type DTSC Renewal
[x] Other: Non-Haz Facility Exp & Haz Waste Permit Renewal

Project Issues Discussed in Document:

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

Present Land Use/Zoning/General Plan Designation:

Present Land Use: Solid Waste Disposal Facility/Undeveloped Land;
Present Zoning: A (Exclusive Agriculture);
Present Kern County General Plan: 3.4 (Solid Waste Disposal Facility); 8.3 (Extensive Agriculture, 20 acre min).

PROJECT DESCRIPTION: The Clean Harbors Buttonwillow Facility is an existing commercial waste management facility that accepts solid, semi-solid, and liquid, hazardous and non-hazardous wastes for treatment, storage, or disposal.

The proposed project includes Kern County's modification of existing land use authorizations to include an expanded permitted disposal area to facilitate the construction and operation of additional non-hazardous waste landfill units and an expanded permitted facility area

to accommodate a soil stockpiles area; an increase in non-hazardous waste truck traffic; an increase to permitted disposal capacity for additional non-hazardous waste; the construction and operation of four new waste tank treatment buildings; and construction and operation of a latex paint recycling building. In addition, the project proponent has submitted a renewal application to the Department of Toxic Substance Control (DTSC) for the existing Hazardous Waste Facility Permit.

Land use authorizations for the facility were originally approved by the Kern County Board of Supervisors in 1982. Modifications to Conditional Use Permit (CUP) 4 were approved on December 12, 1994, November 30, 2004, July 13, 2010, and December 16, 2014 by both the Kern County Planning Commission and Kern County Board of Supervisors.

Kern County's authorization specifically includes:

1. Amendment to the Kern County General Plan of approximately 320-acres (on parcel 099-251-32) from the existing 8.3 (Extensive Agriculture, 20 min acres) land use designation to a 3.4 (Solid Waste Disposal Facility) designation;
2. Amendment to the Kern County General Plan Appendix E Map, "Petroleum Waste Management" to show the current "Clean Harbors" name and revised permitted facility boundary, with designated buffer property areas;
3. Zone change of 640 acres (parcels 099-290-17 and 099-251-32) from A (Exclusive Agriculture) to M-3 (Heavy Industrial);
4. Application for removal of both parcels (640 acres) from Agricultural Preserve No. 2; and
5. Modification of the existing CUP No.4, Map No. 97 to include:
 - a. an increase in the permitted facility boundary from 320 acres to 640 acres to include the expansion parcel for a soil stockpile area;
 - b. an increase in permitted disposal area from 160 disposal acres to 193.3 acres for the addition of non-hazardous waste landfill units (WMU 36, 37, 38) within existing facility boundary;
 - c. an increase in permitted disposal capacity from 13,250,000 cubic yards to 16,674,000 for the addition of non-hazardous waste landfill units (WMUs 36, 37, 38) within the existing facility boundary;
 - d. construction of four new hazardous waste treatment buildings (tank treatment buildings) to support modifications proposed in a Hazardous Waste Facility Permit renewal application; and
 - e. construction of one latex paint recycling building.

The facility was granted a Hazardous Waste Facility Permit by the DTSC and the U.S. Environmental Protection Agency (EPA) in May 1983 and October 1984. The hazardous Waste Facility Permit was renewed in 1996. On April 6, 2006, the DTSC Hazardous Waste Facility Permit expired but is continued in accordance with regulatory requirements. Clean Harbors Buttonwillow, LLC has submitted a permit renewal application to DTSC. DTSC is currently performing a technical review of the permit renewal application. The facility continues to operate in accordance with the existing Hazardous Waste Facility Permit.

While the Hazardous Waste Facility Permit renewal application does not include an increase in the hazardous waste capacity, the scope of the proposed permit includes renewed authorization for existing facilities and operations, with the following modifications:

1. Reclassification of four existing tank units to miscellaneous units;
2. Construction and operation of four new buildings where treatment is conducted (tank treatment buildings) within the existing facility and reorganizing operations to use the new tank treatment buildings, including the construction of a new bulk container storage pad area for waste that is pending verifications; and
3. Addition of environmental monitoring programs consistent with current regulatory standards.

Reviewing Agencies Checklist

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

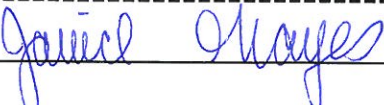
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|---|---|
| <input checked="" type="checkbox"/> Air Resources Board | <input type="checkbox"/> Office of Emergency Services |
| <input type="checkbox"/> Boating & Waterways, Department of | <input type="checkbox"/> Office of Historic Preservation |
| <input checked="" type="checkbox"/> California Highway Patrol | <input type="checkbox"/> Office of Public School Construction |
| <input type="checkbox"/> CalFire | <input type="checkbox"/> Parks & Recreation |
| <input checked="" type="checkbox"/> Caltrans District # <u>6</u> | <input type="checkbox"/> Pesticide Regulation, Department of |
| <input type="checkbox"/> Caltrans Division of Aeronautics | <input checked="" type="checkbox"/> Public Utilities Commission |
| <input type="checkbox"/> Caltrans Planning (Headquarters) | <input checked="" type="checkbox"/> Regional WQCB # <u>5F Central Valley</u> |
| <input type="checkbox"/> Central Valley Flood Protection Board | <input type="checkbox"/> Resources Agency |
| <input type="checkbox"/> Coachella Valley Mountains Conservancy | <input type="checkbox"/> S.F. Bay Conservation & Development Commission |
| <input type="checkbox"/> Coastal Commission | <input type="checkbox"/> San Gabriel & Lower L.A. Rivers and Mtns Conservancy |
| <input type="checkbox"/> Colorado River Board | <input type="checkbox"/> San Joaquin River Conservancy |
| <input checked="" type="checkbox"/> Conservation, Department of | <input type="checkbox"/> Santa Monica Mountains Conservancy |
| <input type="checkbox"/> Corrections, Department of | <input type="checkbox"/> State Lands Commission |
| <input type="checkbox"/> Delta Protection Commission | <input type="checkbox"/> SWRCB: Clean Water Grants |
| <input type="checkbox"/> Education, Department of | <input type="checkbox"/> SWRCB: Water Quality |
| <input checked="" type="checkbox"/> Energy Commission | <input type="checkbox"/> SWRCB: Water Rights |
| <input checked="" type="checkbox"/> Fish & Game Region # <u>4</u> | <input type="checkbox"/> Tahoe Regional Planning Agency |
| <input checked="" type="checkbox"/> Food & Agriculture, Department of | <input checked="" type="checkbox"/> Toxic Substances Control, Department of |
| <input type="checkbox"/> General Services, Department of | <input type="checkbox"/> Water Resources, Department of |
| <input checked="" type="checkbox"/> Health Services, Department of | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Housing & Community Development | <input type="checkbox"/> Other _____ |
| <input checked="" type="checkbox"/> Integrated Waste Management Board | |
| <input checked="" type="checkbox"/> Native American Heritage Commission | |

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

Starting Date March 28, 2024 Ending Date May 13, 2024

Lead Agency (Complete if applicable):

Consulting Firm: <u>Kern County Planning and Natural Resources</u>	Applicant: <u>Clean Harbors Buttonwillow, LLC</u>
Address: <u>2700 "M" Street, Suite 100</u>	Address: <u>2500 West Lokern Road</u>
City/State/Zip: <u>Bakersfield, CA 93301</u>	City/State/Zip: <u>Buttonwillow, CA 93206</u>
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Signature of Lead Agency Representative:  **Date:** March 28, 2024

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

Draft Environmental Impact Report

SCH# 2020069034

**Volume 1
Chapters 1 through 11**

**Clean Harbors WMU Solid Waste Disposal Facility
By Clean Harbors Buttonwillow, LLC**

**GPA No. 7, Map 97
Zone Change No. 2, Map 97
Modification to CUP No. 4, Map 97
Exclusion from Agricultural Preserve No. 2 (PP17117)**



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March 2024

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Appendix D:	Biological Technical Report
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Appendix F:	Energy Technical Report
Appendix G:	Greenhouse Gas Emissions Technical Report
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1.1 Introduction

The Clean Harbors Buttonwillow Waste Management Unit (WMU), Solid Waste Treatment, Storage, and Disposal Facility (project), proposed by Clean Harbors Buttonwillow (project proponent), includes a request for land use entitlements necessary to facilitate the expanded and continued use of a commercial waste management facility. The project site is situated in the southern San Joaquin Valley at an existing solid waste facility located in central Kern County at 2500 West Lokern Road, Buttonwillow, California, approximately 8 miles west of Buttonwillow, on the northern side of Lokern Road. The Clean Harbors Buttonwillow Facility is an existing commercial waste management facility owned and operated by Clean Harbors Buttonwillow, LLC, which accepts solid, semi-solid, and liquid, hazardous and non-hazardous wastes for treatment, storage, or disposal.

This Draft Environmental Impact Report (EIR) has been prepared by Kern County which is the Lead Agency under CEQA. The Draft 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 local, State, and federal permitting agencies that are required to consider the project.

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

1.2 Project Summary

The proposed project includes a request for land use entitlements to facilitate the continued and expanded use of the non-hazardous solid waste portion of a facility that was originally approved and has been in operation since 1983. The project proponent is also proposing modification to current operations and renewal of the existing hazardous waste disposal permit. The project modifications include: an expanded permitted disposal area to facilitate the construction and operation of additional non-hazardous waste landfill units and an expanded permitted facility area to accommodate a soil stockpiles area; an increase to permitted waste disposal capacity for additional non-hazardous waste; an increase to waste truck traffic; the construction and operation of four new hazardous waste tank treatment buildings; and construction and operation of a latex paint recycling building. In addition to proposed modifications to existing uses the project proponent is also seeking renewal of the existing Hazardous Waste Facility Permit for the hazardous waste management operations including the addition of the four new hazardous waste tank treatment buildings required by DTSC.

1.2.1 Entitlements Required

Kern County Planning and Natural Resources Department

- Consideration and certification of a final Environmental Impact Report (FEIR) with appropriate State CEQA Guidelines Sections 15091 Findings of fact, 15093 Statement of Overriding Considerations (if necessary), and adoption of the Mitigation Measures Monitoring Program by the Kern County Planning Commission and Kern County Board of Supervisors
- Amendment to the Kern County General Plan of approximately 320-acres (on parcel 099-251-32) from the existing 8.3 (Extensive Agriculture, 20 min acres) land use designation to a 3.4 (Solid Waste Disposal Facility) designation;
- Amendment to the Kern County General Plan Appendix E Map, “Petroleum Waste Management” to show the current “Clean Harbors” name and revised permitted facility boundary, with designated buffer property area;
- Zone change (Zone Change Case No. 2, Map 97) of 640 acres (parcels 099-290-17 and 099-251-32) from A (Exclusive Agriculture) to M-3 (Heavy Industrial);
- Application for removal of both parcels from Agricultural Preserve No. 2; and
- Modification of the existing CUP No.4, Map No. 97 to include:
 - an increase in the permitted facility boundary from 320 acres to 640 acres to include the expansion parcel for a soil stockpile area;
 - an increase in permitted disposal area from 160 acres to 193.3 acres for the addition of non-hazardous waste landfill units (WMU 36, 37, 38) within existing facility boundary;
 - an increase in permitted disposal capacity from 13,250,000 cubic yards to 16,674,000 for the addition of non-hazardous waste landfill units (WMUs 36, 37, 38) within existing facility boundary;
 - construction of four new hazardous waste treatment buildings (tank treatment buildings) to support modifications proposed in a Hazardous Waste Facility Permit renewal application; and
 - construction of one latex paint recycling building.

Kern County Public Works

- Plan for the Disposal of Drainage Waters
- Grading and Building Plans
- Hazardous Materials Business Plan
- Septic and Water System Permits
- Spill Prevention Control and Countermeasure Plan
- Safety Management Procedures
- Access Road Design and Encroachment Permit

Kern County Fire Department

- Fire Safety Plan

Department of Toxic Substances (DTSC)

- Hazardous Waste Facility Permit renewal application

Regional Water Quality Control Board (RWQCB)

- Waste Discharge Requirements

California Department of Resources Recycling and Recovery (CalRecycle)

- Odor Impact Minimization Plan
- Solid Waste Facility Permit

San Joaquin Valley Air Pollution Control District (SJVAPCD)

- Authority to Construct
- Permit to Operate

1.3 Purpose and Use of the EIR

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 will consider the information in this EIR, including the public comments and staff response to those comments, during the public hearing process. As a legislative action, the final decision is made by the Kern County Board of Supervisors, which may approve, conditionally approve, or deny the project. The purpose of an EIR is to identify:

- The significant potential impacts 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 preparation of an EIR 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 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 impacts 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 EIR is being distributed directly to agencies, organizations, and interested groups and persons for comment during a 45-day formal review period in accordance with Section 15087 of the *CEQA Guidelines*.

The EIR process, including means by which members of the public can comment on the EIR, is discussed further in Chapter 2, *Introduction*.

1.4 Project Overview

This section contains an overview of the proposed project. A more detailed description of the project is included in Chapter 3, *Project Description*.

1.4.1 Project Objectives

The project applicant has identified the following project objectives:

Non-Hazardous Waste Objectives

- Modify existing CUP to include new non-hazardous solid waste landfills and stock piles of borrow dirt within modified permitted facility boundary, to decrease the placement of non-hazardous materials into hazardous material landfills, thus preserving the life of the hazardous waste landfills;
- Construct one new paint recycling building at the original facility;
- To provide clarity of definitions and expanded activities allowed under the CUP;
- To expand the daily non-hazardous vehicle tonnage limit to support current and future operations;
- To continue to provide economic benefits to Kern County through employment of local residents, via expansion of operational activities and construction of new processing equipment, which has the potential to create new job opportunities;
- To continue to comply with San Joaquin Valley Air Pollution Control District's rules and regulation and changes with those regulations in the future;
- Change zoning of proposed project site to facilitate construction of a paint recycling facility;
- To increase non-hazardous waste tonnage for processing through the addition of three new non-hazardous waste landfill units.

Hazardous Waste Objectives

- To make a determination on the Application for a Hazardous Waste Facility Permit submitted to the DTSC.
- Construct four new hazardous waste tank treatment buildings and drum storage buildings at the Facility thereby allowing required hazardous waste treatment operations to be conducted in state-of-the-art facilities that provide a greater level of protection to human health and the environment.

1.4.2 Regional Setting

Kern County is California's third largest county in land area, encompassing approximately 8,202 square miles and has a total population of 916,464 as of January 1, 2019 (California Department of Finance, 2019). The County is bound by Kings, Tulare, and Inyo counties to the north; San Bernardino County to the east; Los Angeles and Ventura counties to the south; and Santa Barbara and San Luis Obispo counties to the west. The County's geography is diverse, containing mountainous areas, agricultural lands, and desert

areas. These areas are generally divided into three regions: the Valley Region, the Mountain Region, and the Desert Region. The project site is located within the Valley Region, which is characterized by relatively low rainfall, relatively high average summer temperatures, and generally mild winters.

The dominant land use within the County is agriculture, although over the last few decades, urban development has occurred in and around the County’s 11 incorporated cities. Bakersfield is the county’s largest City, with a population of approximately 386,839 persons as of January 1, 2018 (California Department of Finance 2018).

1.4.3 Surrounding Land Uses and Project Site Conditions

The site is bordered to the north by agricultural land, which historically has included pistachios and alfalfa, and to the west, south and east by oil production. The nearest residentially populated area to the project site is in the unincorporated community of Buttonwillow, California approximately 8 miles to the west. The project site is located approximately 25 miles west of the Bakersfield City limits (31 miles west of downtown Bakersfield), approximately 8 miles west of Buttonwillow, approximately 15 miles south of Lost Hills, approximately 7 miles north of McKittrick, and approximately 20 miles north of Taft. The existing solid waste facility occupies Assessor’s Parcel Number (APN) 099-290-17; if the expansion request is approved, APN 099-261-32 would also become part of the site. The APNs are listed in in **Table 1-1, *Project Parcels and Land Uses***.

TABLE 1-1: PROJECT PARCELS AND LAND USES

Assessor Parcel Number	Existing Land Use	Existing Map Code Designation	Existing Zoning Classification
099-290-17	Developed with Commercial Landfill Facility; vacant land	3.4 (Solid Waste Disposal Facility) 8.3/2.5 (Extensive Agriculture, 20 acre min, Flood Hazard); 8.3 (Extensive Agriculture) (min. 20- or 80-acre parcel size)	A (Exclusive Agriculture)
099-261-32	Developed with Landfill Facility; landfill buffer	3.4 (Solid Waste Disposal Facility) 3.4 (Solid Waste Disposal Facility)	A (Exclusive Agriculture)

The existing commercial waste management facility that accepts solid, semi-solid, and liquid, hazardous and non-hazardous wastes for treatment, storage, or disposal. The approximately 320-acre site contains 10 modular administrative and waste-receiving buildings, an approximately 1,500-square foot Lab C building, and 144-square foot fire pump shed in the administration area. Additionally, the site has an approximately 2,000-square foot maintenance shop, approximately 18,000-square foot roof for the Stabilization and Treatment Unit (STU), treatment lab, and approximately 800-square foot treatment building in the west-central portion of the site.

The project site is relatively flat with a gentle downward slope to the northeast with elevations ranging from approximately 335 feet above mean sea level (msl) near the northeast corner to 415 feet above msl near the southwest site boundary. The project site is located within Flood Zone X, with a 0.2-percent-annual-chance

(or 500-year) flood chance as designated by the Flood Insurance Rate Map (FIRM) issued by the Federal Emergency Management Agency (FEMA). The project site is not located within a 100-year Flood Zone.

The project site is served by the Kern County Sheriff's Office (KCSO) for law enforcement and public safety, Kern County Fire Department (KCFD) for fire protection, and Kern County Medical Emergency Service for emergency medical and rescue services. The closest KCSO Substation is the Buttonwillow substation, 181 E.1st Street, Buttonwillow, CA located approximately 8 miles east of the project site. The nearest KCFD fire station that would serve the project is Station No. 25 (Buttonwillow), located at 100 Mirasol Avenue, Buttonwillow, CA which is also approximately 8 miles east of the project site. The nearest school to the project site is Buttonwillow Elementary at 42600 Hwy 58, Buttonwillow, CA, located approximately 8 miles east in the community of Buttonwillow

1.4.4 Project Characteristics

Construction

Non-Hazardous Waste Landfill Design

The gross capacity of WMUs 36, 37, and 38 will be 1,348,000, 1,219,000 and 857,000 cubic yards (CY), respectively, for a total additional increase of 3,424,000 CY. The footprints for WMUs 36, 37, and 38 will be 12.6, 12.3, and 8.4 acres, respectively. The estimated lifetime of the new Class II landfills is a combined 16 years.

The liner, the leachate collection and removal system (LCRS), and closure design for the new Class II non-hazardous waste landfills has been prepared to meet or exceed state and federal regulatory requirements. The new Class II non-hazardous waste landfills have been designed to meet the physical and climatological settings of the landfills.

Non-Hazardous Waste Landfill Construction

Non-hazardous WMU 36 will be constructed in two stages and filled sequentially. The liner and LCRS systems of non-hazardous WMUs 37 and 38 will each be constructed in one phase. Construction will include excavation, placement and compaction of engineered fill and prepared subgrade, placement of drainage aggregate and operations layer material, installation of piping, lighting, and installation of temporary erosion control features. Construction is expected to begin within a year of receiving all the necessary permits and approvals for construction and take an estimated seven months. The construction workforce would consist of 8 to 35 workers over the seven months construction period. A total of approximately 2.01 MCY of cut and approximately 61,000 CY of fill is required to develop the landfill units. The soils excavated from the new non-hazardous landfills will be used for landfill construction and operations, cover soil, or stockpiled.

Hazardous Tank Treatment Building Design

The four proposed tank treatment buildings (TTBs) share a common, modular design, and generally differ only in building orientation, or in the respective location of dry reagent storage/handling area and Drum Storage Building for each TTB, which may change by 180 degrees depending on the TTB. Each TTB has

building dimensions of 72 feet by 62 feet for an area of 4,464 square feet per building. The TTBs are to be permitted as above-ground tank systems.

The treatment tanks will be installed in recessed concrete vaults within the TTB process floor, with less than 90 percent of the treatment tank volume below ground level surrounding the TTBs.

Primary containment for the TTBs is provided by the steel treatment tanks, which have integral secondary containment, and additional tertiary containment via a coated concrete vault, and by the containers in the Drum Storage Buildings. The TTB concrete process floors will serve as secondary containment system to collect liquid waste spillage, fire suppression deluge water, equipment or building wash waters, emergency eye wash or emergency shower discharges, or other liquids. Each TTB process floor perimeter is surrounded by a continuous 7-inch high perimeter berm and is sloped to a sump. Additional containment is provided via a continuous concrete containment curb around the TTB building.

Hazardous Tank Treatment Building Construction

Construction of the four new TTBs is expected to begin within six months of receiving all the necessary permits and approvals for construction and estimated to take one year. The construction workforce would consist of 8 to 65 workers over the one-year construction period.

Paint Recycling Building Design

The paint recycling building will consist of a pre-engineered steel building with loading dock(s).

Construction Water Use

During construction of the proposed project, water would be required for common construction-related purposes, including but not limited to: dust suppression, soil compaction, truck wheel washing, and grading. Water would be supplied by an existing on-site water well used to draw water from the lower water table zone for non-potable water use for construction and dust suppression. Water for drinking, sanitary showers, and domestic use at the facility is provided by the facility water supply system. This system currently consists of a 10,000-gallon tank located east of the laboratory. Potable water is brought to the facility from Buttonwillow Truck Stop and placed in the tank. Bottled water would be supplied to the facility for drinking.

Operation

Non-Hazardous Waste Landfill Operation

The waste to be accepted in the new non-hazardous landfills will be restricted to solid, non-hazardous, non-Municipal Solid Waste Class II designated wastes. The non-hazardous solid waste will consist of non-putrescible, solid, semi-solid wastes including ashes, industrial wastes, demolition and construction wastes, and wastes from fire and natural disaster cleanup as allowed by law. The new non-hazardous WMUs are anticipated to accept a maximum of 4,050 tons of non-hazardous waste per day, with an average of approximately 1,000 tons per day, over and above the existing levels of activity.

The facility's CUP currently has no limit on truck trips per 24-hour period. However, the tonnage limit typically forces truck trips to top out at approximately 198 trucks per day. Truck trips for waste streams would increase under the proposed project, however waste tonnages will adhere to permitted levels.

The new Class II non-hazardous landfills will require two full-time personnel for site operations, maintenance, environmental controls, records, emergency, and health and safety.

As development of cells within WMU 35 progresses southward, the facility entrance will be relocated to the southwestern end of the facility.

The facility will follow procedures for on-site routing of waste-hauling trucks to allow for orderly and safe waste routing procedures. In general, these procedures include:

- Truck drivers will log-in at the main gate or truck receiving/scales area. Immediately after this log-in, drivers will be required to stop and submit a shipping document (e.g., non-hazardous manifest, bill-of-lading, etc.) to truck receiving. A waste sample may be taken from the load as required by the waste analysis plan to verify that the load satisfies the acceptance requirements.
- Upon approval of waste, vehicles will be directed to the disposal area on an assigned, consistent route determined by the facility's General Manager.
- Once a truck arrives at the appropriate landfill, the driver will then be allowed to unload the waste.

Paint Recycling Building Operation

The paint recycling building will be used for consolidating and recycling leftover paint as part of the PaintCare program. Paint, stains, and other acceptable program products are accepted if the lids are secured tightly, no containers are leaking, and they have original labels and in their original containers. No oil-based paints will be recycled. The products that are accepted will be packed into larger containers (boxes or drums). These containers will be sent to a PaintCare facility for sorting by type to consolidate into larger containers to be reused and/or recycled.

Hazardous Waste Tank Treatment Buildings Operation

The project involves the development of four Tank Treatment Buildings (TTBs) as part of the proposed Hazardous Waste Facility permit renewal. Treatment in the TTBs will modify the wastes to be either less hazardous or nonhazardous as defined by California hazardous waste management laws and regulations. Different treatment standards have been established for certain California regulated wastes. A waste must be treated to meet the applicable land disposal regulations prior to being disposed in a landfill.

The TTBs will include one bulk sludge or solid waste unloading bay per TTB building, which will include truck ramp, overhead rollup door, and treatment tank. TTBs will also include container storage space for receiving, storing and transferring containerized wastes in drum type containers, and related waste processing and treated waste handling equipment. Waste will be treated in a double-walled steel tank installed within a concrete vault in the TTB process floor. Following treatment, treated wastes will be transferred via excavator bucket to rolloff bins. Treated wastes needing Land Disposal Restriction (LDR) verification will be staged (in rolloff bins) at the Container Storage Area (CSA) while the treated wastes cure, and are later tested prior to disposal.

Ancillary Operations/Facility Operating Hours

As allowed by CUP 4, Map 97, the landfill accepts waste 253 days per year (5 days per week, 52 weeks a year assuming 7 holidays). The facility's normal hours of operation are 9:00 a.m. to 5:00 p.m., Monday through Friday and closed on Saturday and Sunday for waste receiving activities while the facility processing activities are typically conducted from 6:00 a.m. to 11:00 p.m. These are the normal hours during

which waste shipments are received at the facility; the facility will make special arrangements for off-hour waste acceptance based on customer needs. After-hours activities may occur to accommodate unanticipated maintenance and repair, waste disposal, and construction activities. The facility is usually closed on New Year's Day, Christmas, Thanksgiving, the day after Thanksgiving, Labor Day, Memorial Day, and the Fourth of July. However, the facility may operate on these holidays if a request or a need arises.

1.5 Environmental Impacts

Section 15128 of the *CEQA Guidelines* requires that an EIR contain a statement briefly indicating the reasons why any new and possibly significant effects of a project were determined not to be significant and were, therefore, not discussed in detail in the EIR. The County has engaged the public to participate in the scoping of the environmental document. The contents of this EIR were established based on an initial study/notice of preparation (IS/NOP) prepared in accordance with the *CEQA Guidelines*, as well as public and agency input that was received during the scoping process. Comments received on the IS/NOP are located in Appendix A of this EIR. Specific issues found to have no impact or less than significant impacts during preparation of the IS/NOP do not need to be addressed further in this EIR. Based on the findings of the IS/NOP and the results of scoping, a determination was made that this EIR must contain a comprehensive analysis of all environmental issues identified in Appendix G of the *CEQA Guidelines* except for Population and Housing, and Recreation.

1.5.1 Impacts Not Further Considered in This EIR

As discussed in the IS/NOP (located in 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.

- Population and Housing
- Recreation

1.5.2 Impacts of the 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 1-8, 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
- Agriculture and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Public Services
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities
- Wildfire

1.5.3 Less-than-Significant Impacts

Table 1-2, *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 analysis of these impacts and describe the means by which the mitigation measures listed in Table 1-2 would reduce impacts to a less-than-significant level.

TABLE 1-2: SUMMARY OF PROJECT IMPACTS THAT ARE LESS THAN SIGNIFICANT OR LESS THAN SIGNIFICANT WITH MITIGATION

Impact	Mitigation Measures
Aesthetics (Project and Cumulative)	MM 4.1-4
Agriculture and Forest Resources (Project and Cumulative)	No mitigation required
Air Quality (Project)	MM 4.3-1 and MM 4.3-4
Biological Resources (Project and Cumulative)	MM 4.4-1 through MM 4.4-13
Cultural Resources (Project and Cumulative)	MM 4.5-1 and MM 4.5-2
Energy (Project and Cumulative)	No mitigation required
Geology and Soils (Project and Cumulative)	MM 4.7-1 through MM 4.7-5
Greenhouse Gas Emissions (Project and Cumulative)	No mitigation required
Hazards and Hazardous Materials (Project and Cumulative)	MM 4.9-1 and MM 4.9-2
Hydrology and Water Quality (Project and Cumulative)	MM 4.10-1
Land Use and Planning (Project and Cumulative)	No mitigation required
Mineral Resources (Project and Cumulative)	MM 4.9-2
Noise (Project and Cumulative)	MM 4.13-1
Public Services (Project and Cumulative)	MM 4.14-1 and MM 4.14-2
Transportation and Traffic (Project and Cumulative)	MM 4.15-1 and MM 4.15-2
Tribal Cultural Resources (Project and Cumulative)	MM 4.5-1 and MM 4.5-2

TABLE 1-2: SUMMARY OF PROJECT IMPACTS THAT ARE LESS THAN SIGNIFICANT OR LESS THAN SIGNIFICANT WITH MITIGATION

Impact	Mitigation Measures
Utilities and Service Systems (Project and Cumulative)	No mitigation required
Wildfire (Project and Cumulative)	MM 4.14-1

1.5.4 Significant and Unavoidable Impacts

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

According to Section 15355 of the CEQA *Guidelines*, the term cumulative impacts “...refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” Individual effects that may contribute to a cumulative impact may be from a single project or a number of separate projects. Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related or nearby projects, including newly proposed projects, the effects could be cumulatively considerable. This EIR has considered the potential cumulative effects of the project along with other current and reasonably foreseeable projects. Impacts for the following have been found to be cumulatively considerable:

- Air Quality (Cumulative)

Table 1-3, *Summary of Significant and Unavoidable Project-Level and Cumulative Impacts of the Solar Facility*, presents those impacts at the project-level and cumulatively. Section 4.3 of this EIR presents detailed analyses of these impacts and describes the means by which the mitigation measures listed in Table 1-3 would reduce the severity of impacts to the extent feasible.

TABLE 1-3: SUMMARY OF SIGNIFICANT AND UNAVOIDABLE PROJECT-LEVEL AND CUMULATIVE IMPACTS

Impact	Project Impacts	Cumulative Impacts	Mitigation Measures
Air Quality	Emissions from project construction are considered less than significant after implementation of MM 4.3-1 through MM 4.3-3. These measures would not reduce operational emissions of VOC and NOx to a less-than-significant level. Therefore, MM and 4.3-4 would be required. However, the reductions provided by 4.3-4 may not completely offset the emissions that exceed the impact threshold. Therefore, the project	The project annual permitted VOC emissions and annual non-permitted NOx emissions are above the SJVAPCD thresholds. Based on the region’s non-attainment status for ozone, the project would be cumulatively considerable for operational VOC and NOx emissions. The project would result in significant and unavoidable cumulative impacts .	MM 4.3-1 through MM 4.3-5

TABLE 1-3: SUMMARY OF SIGNIFICANT AND UNAVOIDABLE PROJECT-LEVEL AND CUMULATIVE IMPACTS

Impact	Project Impacts	Cumulative Impacts	Mitigation Measures
	impact would be significant and unavoidable for operational VOC and NOx emissions.		

1.5.5 Irreversible Impacts

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

Build-out of the project would commit nonrenewable resources during project construction. During project operations, oil, gas, and other fossil fuels and nonrenewable resources would be consumed, primarily in the form of transportation fuel for project employees. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of long-term project operations. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the Kern County General Plan, as a matter of public policy, those commitments have been determined to be acceptable. The Kern County General Plan ensures that any irreversible environmental changes associated with those commitments will be minimized.

1.5.6 Growth Inducement

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

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

As described in Chapter 3, *Project Description*, the project proposes 1) construction and operation of a non-hazardous waste landfill expansion to provide area for borrow landfill pit soil to be stored on a new 320-acre parcel site to the east of the exiting waste facility area; 2) renew the existing hazardous waste facility permit, and build four (4) new hazardous waste buildings to encapsulate hazardous waste that is currently being processed at the existing site. The proposed facilities would operate 24 hours a day, 365 days per year. Currently, the Clean Harbors Buttonwillow employs 30 full-time employees for the landfill facility. The project would provide new employment consistent with the adopted *Kern County General Plan* goals, plans, and policies. It is anticipated that approximately 8 to 65 temporary workers would be needed to complete the construction of the project over one year. It is expected that the construction workforce would commute to the site from various local communities and the number of workers expected to relocate to the surrounding area is not expected to be substantial. Thus, the project would have minimal, if any, growth-inducing impacts associated directly or indirectly with population increase in the area.

The proposed project would expand the available solid waste disposal capacity within the County. As discussed in Section 4.17, *Utilities and Service Systems*, the development of the non-hazardous WMUs would provide approximately 16 years of additional landfill capacity, while preserving the Class I hazardous land fill capacity in the County. As the County currently has numerous landfill and waste transfer facilities, including the existing project, growth in the county is not currently inhibited by a lack of solid waste facilities. Therefore, the expansion of the proposed facility does not represent the removal of an infrastructure barrier to additional growth in the County.

The project would therefore not result in significant or unplanned growth within the County.

1.6 Alternatives to the Project

Section 15126.6 of the CEQA *Guidelines* states that an EIR must address “a range of reasonable alternatives to the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” Based on the significant environmental impacts of the proposed project, the aforementioned objectives established for the proposed project and the feasibility of the alternatives considered, a range of alternatives is analyzed below and discussed in detail in Chapter 6, *Alternatives*, of this EIR.

1.6.1 Alternatives Considered and Rejected

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects (CEQA *Guidelines*, Section 15126.6[c]). Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered (CEQA *Guidelines*, Section 15126[f][2]). Kern County considered several alternatives to reduce impacts to aesthetics (project and cumulative), air quality (project and cumulative), biological resources (cumulative), noise (project and cumulative), and wildfire (cumulative). Per CEQA, the lead agency may make an initial determination as to which alternatives are feasible and warrant further consideration, and which are infeasible. The following alternative was initially considered but was eliminated from further consideration in this EIR.

- **Off-site Alternative.** This alternative would involve the development of the proposed project on another site located within Kern County. As an alternative location would not be able to rely on the existing facilities, overall construction would be greater, and the “footprint” impacts of the project would be increased. In addition, it is the County’s policy to maximize the use of existing facilities rather than to locate new facilities. For these reasons, an alternative site is not considered to be “potentially feasible.”

1.6.2 Alternatives Selected for Analysis

The following alternatives have been determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the project, but which may avoid or substantially lessen any of the significant impacts of the project. The following alternatives are analyzed in detail in this chapter of the EIR:

- Alternative 1: No Project Alternative
- Alternative 2: No Expansion Alternative

- Alternative 3: Expanded Non-Hazardous Facility
- Alternative 4: Non-Hazardous Facility (No Expansion)

Table 1-4, *Summary of Development Alternatives*, on the following page provides a summary of the relative impacts and feasibility of each alternative and **Table 1-5**, *Comparison of Alternatives*, provides a summary side-by-side comparison of the potential impacts of the alternatives and the project. A complete discussion of each alternative is provided below.

TABLE 1-4: SUMMARY OF DEVELOPMENT ALTERNATIVES

Alternative	Description	Basis for Selection and Summary of Analysis
Project	<ul style="list-style-type: none"> • Increased non-hazardous waste facility capacity • Renewal of Hazardous Waste Permit • Construction of new hazardous waste treatment facilities 	N/A
Alternative 1: No Project Alternative	<ul style="list-style-type: none"> • The County would not approve the non-hazardous expansion. • DTSC would not approve the renewal of the Hazardous Waste Permit. The facility would cease to operate. 	<ul style="list-style-type: none"> • No project (no action) as required by CEQA • Avoids all direct significant impacts • May result in indirect impacts as hazardous wastes are diverted to other Class I facilities in the region. • Does not meet any of the project objectives
Alternative 2: No Expansion Alternative	<ul style="list-style-type: none"> • The County would not approve the non-hazardous expansion. • DTSC would approve the renewal of the Hazardous Waste Permit. 	<ul style="list-style-type: none"> • Avoids need for CUPs and GPA • Avoids significant and unavoidable air quality impact. • Reduces (but does not avoid) impacts to biological resources, and tribal cultural resources • Does not meet all key project objectives
Alternative 3: Expanded Non-Hazardous Facility Alternative	<ul style="list-style-type: none"> • DTSC would not approve the renewal of the Hazardous Waste Permit. • County would approve the expansion and allow existing operation to continue as a non-hazardous facility at 8,100 tons per day 	<ul style="list-style-type: none"> • Similar to proposed project. • Does not meet all key project objectives
Alternative 4: Non-Hazardous Facility (No Expansion) Alternative	<ul style="list-style-type: none"> • DTSC would not approve renewal of the Hazardous Waste Permit • The County would approve the facility to operate as a non-hazardous facility at current levels of 4,500 tons per day. 	<ul style="list-style-type: none"> • Avoid significant and unavoidable air quality impact • Greater impacts to GHG emissions land use and planning, and noise • Reduces (but does not avoid) impacts to biological resources, and tribal cultural resources • Does not meet all key project objectives

TABLE 1-5: COMPARISON OF ALTERNATIVES

Environmental Resource	Proposed Project	Alternative 1: No Project	Alternative 2: No Expansion	Alternative 3: Expanded Non-Hazardous Facility	Alternative 4: Non-Hazardous Facility (No Expansion)
Aesthetics	Less than Significant with Mitigation (light and glare)	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Agricultural and Forestry Resources	Less than Significant	Similar (LTS)	Similar (LTS)	Similar (LTS)	Similar (LTS)
Air Quality	Significant and Unavoidable (ozone precursors, cumulative)	Less (LTS)	Less (LTS)	Similar (SU)	Similar (LTS)
Biological Resources	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Cultural Resources	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Energy	Less than Significant	Less (LTS)	Less (LTS)	Similar (LTS)	Less (LTS)
Geology and Soils	Less than Significant with Mitigation	Less (LTS)	Less (LTS)	Similar (LTS)	Less (LTS)
Greenhouse Gas Emissions	Less than Significant	Similar (LTS)	Less (LTS)	Similar (LTS)	Less (LTS)
Hazards and Hazardous Materials	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Hydrology and Water Quality	Less than Significant	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Land Use and Planning	Less than Significant	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Noise	Less than Significant with Mitigation	Less (LTS)	Less (LTS)	Similar (LTS)	Less (LTS)
Public Services	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Transportation	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Tribal Cultural Resources	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)

TABLE 1-5: COMPARISON OF ALTERNATIVES

Environmental Resource	Proposed Project	Alternative 1: No Project	Alternative 2: No Expansion	Alternative 3: Expanded Non-Hazardous Facility	Alternative 4: Non-Hazardous Facility (No Expansion)
Utilities and Service Systems	Less than Significant	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Wildfires	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Meet Project Objectives?	All	None	Partially	Partially	Partially
Reduce Significant and Unavoidable Impacts?	N/A	All	Yes	None	Yes

NI = No Impact

LTS = Less than Significant

SU = Significant and Unavoidable

Alternative 1: No Project Alternative

The CEQA *Guidelines* require EIRs to include a No Project Alternative for the purpose of allowing decision makers to compare the effects of approving the proposed project versus not approving the project. For the proposed project, two separate approvals are required, which would affect the project site. Therefore, Alternative 1, No Project Alternative, assumes that neither the County nor DTSC takes an action to approve the proposed project. Other scenarios, where only one agency with jurisdiction over the project takes action, are discussed below.

Under the No Project Alternative, the County would not approve the proposed non-hazardous expansion of the waste disposal facility and DTSC would not approve the renewal of the hazardous waste facility. Therefore, the site would cease to receive waste (neither hazardous nor non-hazardous) and the closure plan and post-closure maintenance plan would be implemented. The proposed post-closure use of the existing facility is unirrigated open space.

Alternative 2: No Expansion Alternative

Alternative 2, the No Expansion Alternative, would not include the proposed expansion of non-hazardous waste disposal in the amount of 4,050 tons per day. This alternative assumes that the relicensing of the existing hazardous waste facility would be approved, at the current amount of 4,050 tons per day. This alternative represents continued operation of the facility as it currently exists. A combination of hazardous and non-hazardous waste would continue to be received. The 320-acre expansion site located to the east of the existing facility would not be acquired. The estimated closure date of the existing facility is 2040, which would remain unchanged under this Alternative.

Alternative 3: Expanded Non-Hazardous Facility

Under Alternative 3, the Expanded Non-Hazardous Facility, the hazardous waste facility would not be relicensed by DTSC, but the County would permit both the existing facility to operate as a non-hazardous facility, and would permit the additional 4,050 tons per day, for a total of 8,100 tons per day of non-hazardous disposal. The 320-acre expansion site would be acquired, similar to the proposed project. Relocation and construction of new on-site facilities would occur, similar to the proposed project, but facilities for handling hazardous wastes, including the paint recycling facility and the four tank treatment buildings (TTBs) would not be constructed.

Alternative 4: Non-Hazardous Facility (No Expansion)

Under Alternative 4, the Non-Hazardous Facility (No Expansion), the hazardous waste facility would not be relicensed, and the county would permit the existing facility to operate as a non-hazardous waste facility. No expansion (of either the site boundary or daily tonnage) would be permitted. The facility currently receives both hazardous and non-hazardous material, and this alternative would eliminate the hazardous waste stream, but allow 4,050 tons per day of non-hazardous waste. Closure would be anticipated in 2040, per the current estimates for the existing facility.

1.6.3 Environmentally Superior Alternative

There are a number of factors in selecting the environmentally superior alternative. An EIR must identify the environmentally superior alternative to the project. Alternative 1, the No Project Alternative, would be environmentally superior to the project on the basis of its minimization or avoidance of physical environmental impacts. However, CEQA *Guidelines* Section 15126.6(e)(2) states:

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

The No Expansion Alternative and the Non-Hazardous (No Expansion) Alternative are very similar in that each maintains the current facility size and operations. The Non-Hazardous Alternative would convert the existing Class I landfill to a non-hazardous facility. Although the proposed project does not increase risk relative to disposal of hazardous materials (as the expansion is related to non-hazardous materials), it may be seen as an environmental benefit to eliminate hazardous materials operations. However, it must be noted that the demand for Class I facilities would not be reduced, and that waste stream would be displaced elsewhere. However, based on the site specific effects, the Non-Hazardous (No Expansion) Alternative can be identified as the Environmentally Superior Alternative.

It is important to note that this alternative does not achieve most of the key project objectives, and may be seen to be in conflict with the County goal of maximizing existing facilities and thereby avoiding the establishment of new waste facilities in the County.

1.7 Areas of Controversy

Areas of controversy were identified through written agency and public comments received during the scoping period. Public comments received during the scoping period are provided in Appendix A. In summary, the following issues were identified during scoping and are addressed in the appropriate sections of Chapter 4:

- Impacts to air quality;
- Impacts to biological resources;
- Impacts to cultural and tribal cultural resources;
- Impacts related to hazardous waste;
- Impacts to hydrology and water quality;
- Impacts to utilities and service systems;
- Impacts to traffic.

1.8 Issues to Be Resolved

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

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

1.9 Summary of Environmental Impacts and Mitigation Measures

Table 1-6, *Summary of Impacts, Mitigation Measures, and Levels of Significance*, summarizes the environmental impacts of the project, mitigation measures, and unavoidable significant impacts identified and analyzed in Sections 4-1 through 4-18 of this EIR. Refer to the appropriate EIR section for additional information.

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	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	No mitigation measures are required.	Less than significant
Impact 4.1-2: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	No Impact	No mitigation measures are required.	No Impact
Impact 4.1-3: The project would not, 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).	Less than significant	No mitigation measures are required.	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 4.1-4: Prior to issuance of building permits, the project proponent shall demonstrate to Kern County Planning and Natural Resources Staff, through the submittal of a lighting plan, that the project site complies with the applicable provisions of the <i>Dark Skies Ordinance</i> (Chapter 19.81 of the Kern County Zoning Ordinance) 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. Lenses and bulbs shall not be exposed or extend below the shields.	Less than Significant
Impact 4.1: Cumulative Impacts	Potentially Significant	Implement Mitigation Measure MM 4.1-1	Less than Significant
4.2 Agriculture and Forestry Resources			
Impact 4.2-1: The project would not Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared	Less than significant	No mitigation measures are required.	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.			
Impact 4.2-2: The project would not conflict with existing zoning for agricultural use or Williamson Act Contract.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.2-3: The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural uses.	No Impact	No mitigation measures are required.	No Impact
Impact 4.2: Cumulative Impacts	Less than significant	No mitigation measures are required.	Less than significant
4.3 Air Quality			
Impact 4.3-1: The project could conflict with or obstruct implementation of the applicable air quality plan.	Potentially significant	<p>MM 4.3-1: The project shall continuously comply with applicable rules and regulations set forth by the San Joaquin Valley Air Pollution Control District.</p> <p>MM 4.3-2: Prior to issuance of grading permit, the project proponent shall submit a Fugitive Dust Control Plan per SJVAPCD Rule 8021 (fugitive dust emissions control from construction, demolition, excavation, extraction, and other earthmoving activities) to SJVAPCD for review and approval. The Fugitive Dust Control Plan shall reduce emissions, during construction of PM₁₀ and PM_{2.5}. The Fugitive Dust Control Plan shall include:</p> <ol style="list-style-type: none"> 1. Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submission and implementation of the plan. 2. Description and location of operation(s). 	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ol style="list-style-type: none"> 3. Listing of all fugitive dust emissions sources included in the operation. 4. The following dust control measures shall be implemented: <ol style="list-style-type: none"> a. All on-site unpaved roads shall be effectively stabilized use water or chemical soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than CARB-approved soil stabilizers, and that shall not increase any other environmental impacts included loss of vegetation. b. All material excavated or graded will be sufficiently watered to prevent excessive dust. Watering will occur as needed with complete coverage of disturbed areas. The excavated soil piles will be watered as needed to limit dust emissions to less than 20 percent opacity or covered with temporary coverings. c. Construction activities that occur on unpaved surfaces will be discontinued during windy conditions when winds exceed 25 miles per hour and those activities cause visible dust plumes. Construction activities may continue if dust suppression measures are used to minimize visible dust plumes. d. Track-out debris onto public paved roads shall not extend 50 feet or more from an active operation and track-out shall be removed or isolated such as behind a locked gate at the conclusion of each workday. 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> e. All hauling materials should be moist while being loaded into dump trucks. f. All haul trucks hauling soil, sand and other loose materials on public roads shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions). g. Soil loads should be kept below 6 inches or the freeboard of the truck. h. Drop heights should be minimized when loaders dump soil into trucks. i. Gate seals should be tight on dump trucks. j. Traffic speeds on unpaved roads shall be limited to a maximum of 25 miles per hour. k. All grading activities shall be suspended when visible dust emissions exceed 20 percent. l. Other fugitive dust control measures as necessary to comply with SJVAPCD Rules and Regulations. m. Disturbed areas should be minimized. 	
<p>Impact 4.3-2: The project could 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.</p>	<p>Potentially significant</p>	<p>MM 4.3-3: The project proponent and/or its contractors shall continuously implement the following measures during construction and operation of the project to control emissions from the on-site equipment:</p> <ul style="list-style-type: none"> a. All equipment shall be maintained in accordance with the manufacture’s specifications. b. All equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for extended periods of time. Engine idling of all equipment shall be minimized. c. Construction equipment shall not operate longer than eight cumulative hours per day. 	<p>Significant and unavoidable</p>

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> d. All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NOX emissions. e. On-road and off-road diesel equipment shall use diesel particulate filters (or the equivalent) if permitted under manufacturer’s guidelines. f. All on-site off-road equipment and on-road vehicles shall meets the recent California Air Resources Board engine emission standards or alternatively fueled equipment, such as compressed natural gas, liquefied natural gas, or electric, as appropriate. 	
		<p>MM 4.3-4: The project proponent shall enter into a Voluntary Emissions Reduction Agreement (VERA) with the San Joaquin Valley Air Pollution Control District (SJVAPCD) to reduce operational emissions of reactive organic gases (ROG) and oxides of nitrogen (NOx). Following implementation of on-site mitigation measures, project emissions of ROG and NOx above the SJVAPCD annual threshold shall be offset through the VERA. The project proponent and SJVAPCD shall enter into a contractual agreement in which the project proponent agrees to mitigate project emissions by providing funds for the SJVAPCDs incentives programs. The funds are disbursed by SJVAPCD in the form of grants for projects that achieve emission reductions. Types of emission reduction projects that have been funded in the past include electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors. The project proponent shall report annually through the Mitigation Monitoring and Reporting program on compliance with the VERA.</p>	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 4.3-3: The project could expose sensitive receptors to substantial pollutant concentrations.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.3-4: The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Potentially significant	<p>MM 4.3-5: Valley Fever. Prior to ground disturbance activities, the project proponent shall implement the following Valley Fever Provisions:</p> <ol style="list-style-type: none"> 1. Provide evidence to the Kern County Planning and Natural Resources Department that the project operator and/or construction manager has developed a “Valley Fever Training Handout”, training, and schedule of sessions for education to be provided to all construction personnel. All evidence of the training session materials, handout(s) and schedule shall be submitted to the Kern County Planning and Natural Resources Department within 24 hours of the first training session. Multiple training sessions may be conducted if different work crews will come to the site for different stages of construction; however, all construction personnel shall be provided training prior to beginning work. The evidence submitted to the Kern County Planning and Natural Resources Department regarding the “Valley Fever Training Handout” and Session(s) shall include the following: <ol style="list-style-type: none"> a. A sign-in sheet (to include the printed employee names, signature, and date) for all employees who attended the training session. b. Distribution of a written flier or brochure that includes educational information regarding the health effects of exposure to criteria pollutant emissions and Valley Fever. c. Training on methods that may help prevent Valley Fever infection. 	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> d. A demonstration to employees on how to use personal protective equipment, such as respiratory equipment (masks), to reduce exposure to pollutants and facilitate recognition of symptoms and earlier treatment of Valley Fever. Where respirators are required, the equipment shall be readily available and shall be provided to employees for use during work. Proof that the demonstration is included in the training shall be submitted to the county. This proof can be via printed training materials/agenda, DVD, digital media files, or photographs. 2. The project proponent also shall consult with the Kern County Public Health Services Department to develop a Valley Fever Dust Management Plan that addresses the potential presence of the Coccidioides spore and mitigates for the potential for Coccidioidomycosis (Valley Fever). Prior to issuance of permits, the project operator shall submit the Plan to the Kern County Public Health Services Department for review and approval. The Plan shall include a program to evaluate the potential for exposure to Valley Fever from construction activities and to identify appropriate safety procedures that shall be implemented, as needed, to minimize personnel and public exposure to potential Coccidioides spores. Measures in the Plan shall include the following: <ul style="list-style-type: none"> a. Provide High-Efficiency Particulate Air (HEPA) filters for heavy equipment equipped with factory enclosed cabs capable of accepting the filters. Require contractors utilizing applicable heavy equipment to furnish proof of worker training on proper use of applicable heavy equipment cabs, such 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>as turning on air conditioning prior to using the equipment.</p> <ul style="list-style-type: none"> b. Provide communication methods, such as two-way radios, for use in enclosed cabs. c. Require National Institute for Occupational Safety and Health (NIOSH)- approved half-face respirators equipped with minimum N-95 protection factor for use during worker collocation with surface disturbance activities, as required per the hazard assessment process. d. Cause employees to be medically evaluated, fit-tested, and properly trained on the use of the respirators, and implement a full respiratory protection program in accordance with the applicable California Occupational Safety and Health Administration Respiratory Protection Standard (8 CCR 5144). e. Provide separate, clean eating areas with hand-washing facilities. f. Install equipment inspection stations at each construction equipment access/egress point. Examine construction vehicles and equipment for excess soil material and clean, as necessary, before equipment is moved off- site. g. Train workers to recognize the symptoms of Valley Fever, and to promptly report suspected symptoms of work-related Valley Fever to a supervisor. h. Work with a medical professional to develop a protocol to medically evaluate employees who develop symptoms of Valley Fever. 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> i. Work with a medical professional, in consultation with the Kern County Public Health Services Department, to develop an educational handout for on-site workers and surrounding residents within three miles of the project site, and include the following information on Valley Fever: what are the potential sources/ causes, what are the common symptoms, what are the options or remedies available should someone be experiencing these symptoms, and where testing for exposure is available. Prior to construction permit issuance, this handout shall have been created by the project operator and reviewed by the project operator and reviewed by the County. No less than 30 days prior to any work commencing, this handout shall be mailed to all existing residences within three miles of the project boundaries. j. When possible, position workers upwind or crosswind when digging a trench or performing other soil-disturbing tasks. k. Prohibit smoking at the worksite outside of designated smoking areas; designated smoking areas will be equipped with handwashing facilities. l. Post warnings on-site and consider limiting access to visitors, especially those without adequate training and respiratory protection. <p>Implement MM 4.3-2</p>	
Impact 4.3: Cumulative Impacts	Potentially significant	Implement MM 4.3-1 through MM 4.3-5.	Significant and Unavoidable

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.4 Biological Resources			
<p>Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.</p>	<p>Potentially significant</p>	<p>MM 4.4-1: Prior to the issuance of grading or building permits, the project operator shall retain a Lead Biologist who meets the qualifications of an Authorized Biologist as defined by USFWS to oversee compliance with protection measures for all listed and other special-status species. The Lead Biologist shall be on the project site during construction of perimeter fencing and grading activities throughout the construction phase. The Lead Biologist shall have the right to halt all activities that are in violation of the special-status species protection measures. Work shall proceed only after hazards to special-status species are removed and the species is no longer at risk. The Lead Biologist shall have in her/his possession a copy of all the compliance measures while work is being conducted on the project site.</p> <p>MM 4.4-2: Construction Worker Environmental Awareness Program. Prior to the issuance of grading or building permits and for the duration of construction activities, within one week of employment all new construction workers at the project site, laydown area and/or transmission routes shall attend a Worker Environmental Awareness Program (WEAP), developed and presented by a qualified biologist. The WEAP shall include:</p> <ol style="list-style-type: none"> a. Any employee responsible for the operations and maintenance of the project facilities shall also attend the WEAP training. b. The program shall include information on the life history of the blunt nosed leopard lizard, Swainson’s hawk, giant kangaroo rat, Nelson’s Antelope ground squirrel, San Joaquin kit fox, Tipton kangaroo rat, burrowing owl, and nesting birds, and other wildlife and plant species that may be encountered during construction activities. The program shall also discuss the legal protection status of each species, 	<p>Less than significant</p>

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>the definition of “take” under the Federal Endangered Species Act and California Endangered Species Act, measures the project proponent is implementing to protect the species, reporting requirements, specific measures that each worker shall employ to avoid take of wildlife species, and penalties for violation of the Federal Endangered Species Act or California Endangered Species Act.</p> <p>c. An acknowledgement form signed by each worker indicating that WEAP training has been completed would be kept on record.</p> <p>d. A sticker shall be placed on hard hats indicating that the worker has completed the Worker Environmental Awareness Program. Construction workers shall not be permitted to operate equipment within the construction areas unless they have attended the WEAP training and are wearing hard hats with the required sticker.</p> <p>e. A copy of the list of the names of all personnel who attended the Worker Environmental Awareness Program and copies of the signed acknowledgement forms shall be submitted to the Kern County Planning and Natural Resources Department.</p> <p>f. A copy of the training transcript, training video or informational binder (including such information as trenching protection for kit fox requirements) for specific procedures shall be kept available for all personnel to review and be familiar with as necessary.</p> <p>g. The construction crews and contractor(s) shall be responsible for unauthorized impacts from construction activities to sensitive biological</p>	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>resources that are outside the areas defined as subject to impacts by project permits.</p> <p>MM 4.4-3: The project proponent shall consult with the USFWS prior to the disturbance of the proposed stockpile areas to authorize impacts to the Kern mallow. The following measures will apply:</p> <ul style="list-style-type: none"> a. The project proponent shall prepare a Kern Mallow Translocation Plan (Translocation Plan) that will be submitted to the USFWS for review and approval as a part of the process to obtain take authorization pursuant to FESA. The Translocation Plan will address at a minimum the preparation of the onsite preserved habitat for plant and soil translocation, pre-disturbance surveys to map current plant locations, seed collection and dispersal to the preserved habitat, and the collection and translocation of topsoil. b. A pre-disturbance survey shall be performed for Kern mallow during the Spring flowering season (March through May) prior to disturbance of the stockpile areas. All plants detected shall be marked with a pin flag and the location will be recorded using a Global Positioning System (GPS) unit. Seed shall be collected from the plants at the appropriate time for dispersal to the preserved mitigation area. If the seed is not immediately transferred to the mitigation area, the seed shall be stored in paper bags in a cool, dry area. c. Topsoil shall be collected from within a 2-meter radius of mapped Kern mallow locations after seed has been collected from individual plants. The salvaged soil shall be dispersed within the onsite mitigation areas. Hand dispersal of the salvaged topsoil shall occur around the base of well-established <i>Atriplex polycarpa</i> shrubs to 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>mimic the microhabitat conditions in which the plants were observed occurring onsite. Following the dispersal of the salvaged soil, the collected seed shall be spread into the soil.</p> <p>MM 4.4-4: Prior to the disturbance of the proposed stockpile areas – as part of the overall coordination that is required with USFWS and CDFW to authorize take of other species listed herein – the project proponent shall consult with the agencies about the blunt-nosed leopard lizard. the intent of the project design is to utilize the onsite avoidance as mitigation for the potential loss of leopard lizard habitat, which would reduce impacts to below a level of significance under CEQA. If additional mitigation is needed pursuant to obtaining take authorization, then the project proponent will identify off-site conservation lands for the leopard lizard.</p> <p>The following measures will apply to the blunt-nosed leopard lizard, as needed, prior to the disturbance of the proposed stockpile areas:</p> <ol style="list-style-type: none"> a. If the blunt-nosed leopard lizard (BNLL) can be confirmed absent from the project site through focused surveys, then the additional measures would not apply to the project. If applicable, focused surveys shall be conducted in accordance with CDFW’s October 2019 revision to the Blunt-Nosed Leopard Lizard Survey Protocol, specifically the section regarding “Surveys for Disturbances Leading to Habitat Removal”. Pursuant to the protocol a total of 12 adult BNLL surveys are to be conducted between April 15 to July 15, with a maximum of four surveys per week and eight surveys within any 30-day time period. At least one survey session should comprise four consecutive days. In addition to the 12 adult BNLL surveys, five additional surveys are required 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>between August 15 and September 30 to best detect subadult and hatchling BNLL – two of which must occur between September 15 and September 30. In total, the 17 survey days must occur within the same survey season/calendar year.</p> <p>b. The project proponent shall prepare a Mitigation Plan to address all avoidance and minimization measures, habitat mitigation, and potential relocation needs for all applicable special-status animals to be impacted by the project, including potentially for the blunt-nosed leopard lizard. The Mitigation Plan shall be provided to the USFWS and CDFW for review and approval as part of the agency consultation process. The Mitigation Plan shall address any other measures needed, including additional preconstruction surveys, exclusionary measures to prevent impacts to individuals within the preservation area, and biological monitoring.</p> <p>MM 4.4-5: A qualified raptor biologist with Swainson’s hawk survey experience, approved by CDFW and/or the appropriate lead agency, shall conduct focused surveys for Swainson’s hawk prior to site disturbance in accordance the protocol set forth by the Swainson’s Hawk Technical Advisory Committee’s <i>“Recommended Timing and Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley (2000).</i> Per the protocol, the surveyed area will include all potential nest trees within a 0.5-mile radius of the project site. A total of six surveys are to be conducted, with three surveys to be conducted between March 20 and April 5, and an additional three surveys to be conducted either between April 5 and April 20, or between June 10 and July 30. A written report documenting the findings of the survey efforts will be provided to CDFW. If no nests are found within the survey area, no additional mitigation will be required. If Swainson’s hawk nests are detected within a 0.5-mile radius of</p>	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>the project’s proposed disturbance footprint, then the project proponent would contact CDFW to obtain an ITP. Subsequently, a qualified biologist will prepare a Swainson’s hawk Monitoring and Mitigation Plan (subject to CDFW approval) that includes the following measures at a minimum:</p> <ul style="list-style-type: none"> a. The project shall not result in any new disturbances, habitat conversions, or any other impacts that may cause nest abandonment or forced fledgling within one half mile of an active nest between March 1 and September 15. Buffer zones may be adjusted in consultation with CDFW. b. The project shall not result in the removal of Swainson’s hawk nest trees (no suitable nest trees occur within the project’s proposed disturbance footprint). c. Impacts to Swainson’s hawk foraging habitat shall be mitigated at a minimum ratio of 1:1 (to be determined and subsequently approved through coordination with CDFW), and shall be achieved through the conservation of suitable foraging habitat onsite, through the conservation of suitable foraging habitat offsite, through the purchasing of mitigation credits in an offsite mitigation bank, or through a combination of the options listed above. <p>MM 4.4-6: Prior to the disturbance of the proposed stockpile areas – as part of the overall coordination that will be required with USFWS and CDFW to authorize take of other species – the project proponent will consult with the agencies about the giant kangaroo rate. The intent of the project is to utilize the onsite avoidance as mitigation for the loss of giant kangaroo rat habitat, which would reduce impacts to below a level of significance under CEQA. If additional mitigation is needed pursuant to</p>	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>obtaining take authorization, then the project proponent will identify offsite conservation lands for the giant kangaroo rat. The following measures shall apply to the giant kangaroo rat, as needed, prior to the disturbance of the proposed stockpile areas:</p> <ol style="list-style-type: none"> a. The project proponent shall prepare a Mitigation Plan to address all avoidance and minimization measures, habitat mitigation, and potential relocation needs for all applicable special-status animals to be impacted by the project, including for the giant kangaroo rat. The Mitigation Plan shall be provided to the USFWS and CDFW for review and approval as part of the agency consultation process. The Mitigation Plan shall address any other measures needed, including additional focused surveys to confirm the occupied habitat area, trapping and relocation of individuals from the disturbance area to the preservation area, exclusionary measures to prevent impacts to individuals within the preservation area, and biological monitoring. b. The Mitigation Plan shall specifically address trapping and relocation of the giant kangaroo rat. Trapping and relocation would include the following specific measures: <ul style="list-style-type: none"> • Exclusion fencing shall be installed (buried > 24 inches deep and a minimum of 36 inches high) along the boundary of the project’s proposed disturbance footprint and the preservation area, to prevent kangaroo rats within the preservation area from entering the disturbance area. • Kangaroo rat individuals shall be translocated from the disturbance area to the onsite preservation area. Trapping and relocation shall be conducted by a qualified biologist holding a valid section 10(a)1(a) 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>recovery permit from USFWS and valid scientific collection permits from CDFW. Trapping shall be conducted prior to ground disturbance at each location where focused trapping efforts determined occupation. Trapping shall occur for a minimum of four trapping nights and shall continue until there are two consecutive nights of unsuccessful trapping.</p> <ul style="list-style-type: none"> • All burrows where small mammals are captured shall be inspected with a burrow scope the morning following capture. If no animals are present in the burrow, the burrow shall be hand excavated by a qualified biologist. • A biological monitor shall be present during all project-related activities occurring adjacent to the preservation area. The details of the biological monitoring shall be identified in the Mitigation Plan subject to approval by the USFWS and CDFW. <p>MM 4.4-7: Prior to the disturbance of the proposed stockpile areas – as part of the overall coordination that is required with CDFW to authorize take of other species – the project proponent shall consult with the agency about the Nelson’s Antelope ground squirrel. The intent of the project design is to utilize the onsite avoidance as mitigation for the loss of Nelson’s Antelope ground squirrel habitat. If additional mitigation is needed pursuant to obtaining take authorization, then the project proponent will identify offsite conservation lands for the Nelson’s Antelope ground squirrel.</p> <p>The following measures shall apply to the Nelson’s Antelope ground squirrel, as needed, prior to the disturbance of the proposed stockpile areas:</p> <ol style="list-style-type: none"> a. The project proponent shall prepare a Mitigation Plan to address all avoidance and minimization measures, habitat 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>mitigation, and potential relocation needs for all applicable special-status animals to be impacted by the project, including for Nelson’s Antelope ground squirrel. The Mitigation Plan shall be provided to the USFWS and CDFW for review and approval as part of the agency consultation process. The Mitigation Plan shall address any other measures needed, including additional focused surveys to confirm the occupied habitat area, trapping and relocation of individuals from the disturbance area to the preservation area, exclusionary measures to prevent impacts to individuals within the preservation area, and biological monitoring.</p> <p>b. The Mitigation Plan shall specifically address trapping and relocation of the ground squirrel. Trapping and relocation would include the following specific measures:</p> <ul style="list-style-type: none"> • Exclusion fencing shall be installed (buried > 24 inches deep and a minimum of 36 inches high) along the boundary of the project’s proposed disturbance footprint and the preservation area, to prevent ground squirrels within the preservation area from entering the disturbance area. • Nelson’s Antelope ground squirrel individuals shall be translocated from the disturbance area to the onsite preservation area. Trapping and relocation shall be conducted by a qualified biologist holding a valid section 10(a)1(a) recovery permit from USFWS and valid scientific collection permits from CDFW. Trapping shall be conducted prior to ground disturbance at each location where focused trapping efforts determined occupation. Trapping shall occur for a minimum of four trapping nights and shall 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>continue until there are two consecutive nights of unsuccessful trapping.</p> <ul style="list-style-type: none"> • All burrows where small mammals are captured shall be inspected with a burrow scope the morning following capture. If no animals are present in the burrow, the burrow shall be hand excavated by a qualified biologist. • A biological monitor shall be present during all project-related activities occurring adjacent to the preservation area. The details of the biological monitoring shall be identified in the Mitigation Plan subject to approval by the USFWS and CDFW. 	
		<p>MM 4.4-8: Prior to the disturbance of the proposed stockpile areas – as part of the overall coordination that is required with USFWS and CDFW to authorize take of other species – the project proponent shall consult with the agencies about San Joaquin kit fox. The intent of the project is to utilize the onsite avoidance as mitigation for the loss of potential kit fox habitat. If additional mitigation is needed pursuant to agency consultation, then the project proponent will identify offsite mitigation options.</p> <ol style="list-style-type: none"> a. Focused surveys shall be performed for the kit fox either in advance of consultation with the agencies, or as part of the consultation process. Surveys are to be performed by a qualified biologist in accordance with the USFWS San Joaquin Kit Fox Survey Protocol for the Northern Range (1999). The protocol states that surveys are to be conducted between May 1 and November 1 and must include one walking transect to detect known, natal and potential kit fox dens. The surveys also must include spotlighting and setting up camera/scent stations, which would be implemented after the transects are conducted. The following measures shall apply to San Joaquin kit 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>fox, as needed, prior to the disturbance of the proposed stockpile areas:</p> <ul style="list-style-type: none"> b. The project proponent shall prepare a Mitigation Plan to address all avoidance and minimization measures, habitat mitigation, and potential relocation needs for all applicable special-status animals to be impacted by the project, including for the San Joaquin kit fox. The Mitigation Plan shall be provided to the USFWS and CDFW for review and approval as part of the agency consultation process. The Mitigation Plan shall address any other measures needed, including additional focused surveys to confirm the occupied habitat area, trapping and relocation of individuals from the disturbance area to the preservation area, exclusionary measures to prevent impacts to individuals within the preservation area, and biological monitoring. c. The Mitigation Plan shall specifically address trapping and relocation of the kit fox, as applicable. Trapping and relocation would include the following specific measures: <ul style="list-style-type: none"> • Exclusion fencing shall be installed (buried > 24 inches deep and a minimum of 36 inches high) around the perimeter of the project’s proposed disturbance footprint. Installation of the exclusion fence shall avoid potential San Joaquin kit fox dens by > 100 feet. • Trapping and relocation shall be conducted by a qualified biologist holding a valid section 10(a)1(a) recovery permit from USFWS and valid scientific collection permits from CDFW. Trapping and relocation shall occur between May 1 and January 15 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>so as to avoid pupping season and potential detrimental effects on young litters.</p> <ul style="list-style-type: none"> • Den sites where San Joaquin kit fox are captured shall be inspected with a burrow scope the morning following capture. If no animals are present in the burrow, the burrow shall be hand excavated by a qualified biologist. • A biological monitor shall be present during all project-related activities that may result in take of covered species. Monitoring reports shall be prepared to comply with USFWS and CDFW standards. <p>MM 4.4-9: Prior to the disturbance of the proposed stockpile areas – as part of the overall coordination that is required with USFWS and CDFW to authorize take of other species – the project proponent shall consult with the agencies about Tipton kangaroo rat. The intent of the project is to utilize the onsite avoidance as mitigation for the potential loss of kangaroo rat habitat. If additional mitigation is needed pursuant to obtaining take authorization, then the project proponent will identify offsite conservation lands for the Tipton kangaroo rat</p> <p>The following measures shall apply to San Joaquin kit fox, as needed, prior to the disturbance of the proposed stockpile areas:</p> <ol style="list-style-type: none"> a. If the Tipton kangaroo rat can be confirmed absent from the project site through focused surveys, then the additional measures would not apply to the project. If needed, a qualified biologist holding a valid section 10(a)1(a) recovery permit from USFWS and valid scientific collection permits from CDFW shall conduct a small mammal trapping effort, for the purposes of detecting presence (specifically, <i>Dipodomys</i> sp.) within areas of suitable habitat that occur within the project’s proposed disturbance footprint. The trapping effort is to 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>be conducted in accordance with USFWS’s Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats (2013). Per the protocol, the trapping effort is to be conducted between April 1 and October 31 and is to comprise five consecutive trapping nights. Trapping shall end upon the first capture of a Tipton kangaroo rat individual.</p> <p>b. The project proponent shall prepare a Mitigation Plan to address all avoidance and minimization measures, habitat mitigation, and potential relocation needs for all applicable special-status animals to be impacted by the project, including potentially for the Tipton kangaroo rat. The Mitigation Plan shall be provided to the USFWS and CDFW for review and approval as part of the agency consultation process. The Mitigation Plan shall address any other measures needed, including additional pre-construction surveys, exclusionary measures to prevent impacts to individuals within the preservation area, and biological monitoring.</p> <p>c. The Mitigation Plan will specifically address trapping and relocation of the kangaroo rat. Trapping and relocation would include the following specific measures:</p> <ul style="list-style-type: none"> • Exclusion fencing shall be installed (buried > 24 inches deep and a minimum of 36 inches high) around the perimeter of the project’s proposed disturbance footprint. Installation of the exclusion fence shall avoid potential Tipton kangaroo rat burrows by > 25 feet. • Trapping and relocation shall be conducted by a qualified biologist holding a valid section 10(a)1(a) 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>recovery permit from USFWS and valid scientific collection permits from CDFW.</p> <ul style="list-style-type: none"> • All burrows where small mammals are captured shall be inspected with a burrow scope the morning following capture. If no animals are present in the burrow, the burrow shall be hand excavated by a qualified biologist. • A biological monitor shall be present during all project-related activities that may result in take of covered species. Monitoring reports shall be prepared to comply with USFWS and CDFW standards. 	
		<p>MM 4.4-10: The following provides measures to confirm the presence/absence of burrowing owls at the site, and measures to be implemented if burrowing owls were detected within the project impact area prior to disturbance. Even if protocol burrowing owl surveys were to be conducted and no owls were detected at the site, pre-disturbance surveys would still be required prior to site disturbance in areas of suitable habitat, and the listed mitigation measures would be implemented at that time if owls were present prior to disturbance.</p> <ol style="list-style-type: none"> a. If protocol presence/absence surveys are deemed necessary, then the breeding season surveys shall be conducted in accordance with protocols identified by 2012 CDFW Staff Report on Burrowing Owl Mitigation. A minimum of four survey visits are required per survey polygon, with at least one site visit to be conducted between February 15 and April 15 and three additional survey visits at least three weeks apart from one another, between April 15 and July 15, with at least one visit occurring after June 15. b. Regardless of the result of any focused breeding season burrowing owl surveys conducted for the project site, 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>pre-disturbance surveys shall be conducted prior to any disturbance at the site. At least one survey shall be performed no more than 30 days to prior to disturbance of the site. If burrowing owls are present within the disturbance area, then the owls shall be relocated from the project site outside of the breeding season following accepted protocols after obtaining approval from CDFW.</p> <p>c. If burrowing owls are present within the project site at the time of disturbance, then the owls shall be passively relocated from the site to the adjacent preservation area. A qualified biologist shall prepare a Burrowing Owl Relocation and Protection Plan that shall document the relocation procedures. The Plan shall be submitted to CDFW for review and approval prior to relocating burrowing owls. Passive relocation shall be performed outside of the breeding season (October 1 to January 31), unless a qualified biologist verifies through non-invasive methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Relocation during the breeding season must be approved by CDFW. Prior to performing the relocation, the biologist shall ensure that the adjacent relocation area contains suitable burrows at a 2:1 ratio over the number of occupied burrows to be impacted. If the relocation site does not contain enough natural burrows, then artificial burrows can be created. Until burrowing owls can be excluded from the impact area, the occupied burrows must be avoided with adequate buffers. During the breeding season, the avoidance buffer shall be as high as 500 meters depending on the type of disturbance occurring adjacent to the occupied habitat.</p>	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>MM 4.4-11: In order to avoid impacts to nesting birds, the project shall implement the following measure, prior to site disturbance:</p> <ul style="list-style-type: none"> a. If feasible, vegetation clearing should be conducted outside of the nesting season (February 1 through September 15). b. If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disking, demolition activities, and grading. If active nests are identified, the biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. <p>MM 4.4-12: In order to reduce and/or avoid indirect impacts to species with the potential to occur within avoided areas the project will implement the following measures to address noise, lighting, dust deposition and drainage, respectively:</p> <ul style="list-style-type: none"> a. Several listed and non-listed species that occur or have the potential to occur within avoided areas on site and within adjacent habitat off site have the potential to be adversely affected by noise associated with construction activities. Proposed noise generating construction adjacent to avoided areas and off-site areas shall incorporate setbacks, berms or walls to minimize the effects of noise on species that have the potential to occur within adjacent areas pursuant to applicable rules, regulations and guidelines related to land use noise standards. b. Several listed and non-listed species that occur or have the potential to occur within avoided areas on site and 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>within adjacent habitat off site (San Joaquin kit fox, giant kangaroo rat, and Tipton kangaroo rat) exhibit nocturnal hunting and foraging behaviors and have the potential to be adversely affected by artificial lighting. As a means to avoid adverse impacts to such species, construction of the proposed stockpile locations will be restricted to daylight hours and will not utilize artificial lighting.</p> <p>c. The project will implement dust control measures pursuant to MM 4.2-1. Additionally, sediment fencing will be erected along the perimeter of the proposed stockpile locations and access roads to prevent dust from blowing into avoided areas and adjacent habitat off site.</p> <p>d. The project will implement measures required through the National Pollutant Discharge Elimination System (NPDES) requirements – specifically, a Storm Water Pollution Prevention Plan (SWPPP) – to ensure that the quantity and quality of runoff discharged to avoided areas and adjacent habitat offsite is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of surface runoff from construction areas into avoided areas and adjacent habitat offsite where sensitive species have the potential to occur.</p>	
<p>Impact 4.4-2: The project would have a substantial adverse effect on any riparian habitat or other sensitive natural community, or jurisdictional waters, identified in local or regional plans, policies, or regulations or by CDFW or USFWS.</p>	<p>Potentially significant</p>	<p>MM 4.4-13: Prior to issuance of any grading or building permit for the expansion site (stockpile area), the project proponent/operator shall submit a final Jurisdictional Delineation report. A copy of this report shall also be provided to the Lahontan Regional Water Quality Control Board (RWQCB) and the County. The following measures shall be implemented:</p> <p>a. Avoidance of non-federal waters identified in the final Jurisdictional Delineation.</p>	<p>Less than significant</p>

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Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> b. Preparation and implementation of a SWPPP, per Mitigation Measure 4.4-12. c. Any material/spoils generated from project activities shall be located away from jurisdictional areas and protected from storm water run-off using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate. d. Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage from contaminating the ground and generally at least 50 feet from the top of bank. e. Any spillage of material will be stopped if it can be done safely. The contaminated area will be cleaned and any contaminated materials properly disposed. For all spills, the project foreman or designated environmental representative will be notified. 	
<p>Impact 4.4-3: The project would not 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.</p>	<p>No impact</p>	<p>No mitigation measures are required.</p>	<p>No impact</p>
<p>Impact 4.4-4: The project would interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.</p>	<p>Potentially significant</p>	<p>Implement MM 4.4-11.</p>	<p>Less than significant</p>
<p>Impact 4.4-5: The project would not conflict with any local policies or ordinances protecting biological</p>	<p>Less than significant</p>	<p>No mitigation measures are required.</p>	<p>Less than significant</p>

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Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
resources, such as a tree preservation policy or ordinance.			
Impact 4.4-6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan.	No impact	No mitigation measures are required.	No impact
Impact 4.4: Cumulative Impacts	Potentially significant	Implement MM 4.1-1 and MM 4.4-1 through MM 4.4-11	Less than significant
4.5 Cultural Resources			
Impact 4.5-1: The project could cause a substantial adverse change in the significance of a historical resource, as defined in CEQA <i>Guidelines</i> Section 15064.5.	Potentially significant	MM 4.5-1: In the event archaeological materials are encountered during the course of grading or construction, the project contractor shall cease any ground disturbing activities within 50 feet of the find. A qualified archaeologist shall evaluate the significance of the resources and recommend appropriate treatment measures. Per CEQA <i>Guidelines</i> Section 15126.4(b)(3), project redesign and preservation in place shall be the preferred means to avoid impacts to significant historical resources. Consistent with CEQA <i>Guidelines</i> Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures in consultation with the County, which may include data recovery or other appropriate measures. The County shall consult with appropriate Native American representatives in determining appropriate treatment for unearthened cultural resources if the resources are prehistoric or Native American in nature. Archaeological materials recovered during any investigation shall be curated at an accredited curation facility. The qualified 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	Less than significant

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Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Natural Resources Department and to the Southern San Joaquin Valley Information Center. Steps to Compliance: <ol style="list-style-type: none"> a. This mitigation measure shall be incorporated as a condition of approval. b. In the event archaeological materials are encountered during the course of grading or construction activities, the project proponent shall retain a qualified archaeologist to evaluate the significance of the resources and recommend appropriate treatment measures. c. The Planning and Community Development Department shall review and approve all reports, correspondence, and determinations regarding historical resources prepared by the qualified archaeologist. d. Kern County Building Inspectors will verify compliance with the mitigation measure in the field prior to and during the construction period. 	
Impact 4.5-2: The project could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA <i>Guidelines</i> Section 15064.5.	Potentially significant	Implement MM 4.5-1.	Less than significant
Impact 4.5-3: The project could disturb human remains, including those interred outside of formal cemeteries.	Potentially significant	MM 4.5-2: If human remains are uncovered during project construction, the project contractor shall immediately halt work within 100 feet of the find, contact the Kern County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.4 (e)(1) of the California Environmental Quality Act Guidelines. If the County Coroner determines that the remains are Native American, the coroner shall contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by Assembly Bill	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		2641). The Native American Heritage Commission shall designate a Most Likely Descendent for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendent regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et. seq.) directing identification of the next-of-kin will apply.	
Impact 4.5: Cumulative Impacts	Potentially significant	Implement MM 4.5-1 and MM 4.5-2	Less than significant
4.6 Energy			
Impact 4.6-1: The project would not 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	No mitigation measures are required.	Less than significant
Impact 4.6-2: The project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.6: Cumulative Impacts	Less than significant	No mitigation measures are required.	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.7 Geology and Soils			
Impact 4.7-1(a): The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault.	Less than Significant	No mitigation measures are required.	Less than significant
Impact 4.7-1(b): The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.	Potentially significant	<p>MM 4.7-1: Prior to the issuance of building or grading permits for the project, the project proponent shall conduct a final engineering design specific geotechnical study to evaluate soil conditions and geologic hazards on the project site and submit it to the Kern County Public Works Department for review and approval. The recommendations of the study shall be incorporated into MM 4.7-2.</p> <p>MM 4.7-2: Prior to the issuance of grading permits, the project proponent shall retain a California-registered professional geotechnical engineer to design the project facilities to withstand probable seismically induced ground shaking at the site as well as other geotechnical hazards including collapsible soils, subsidence, or expansive soils, if applicable, as determined by the Kern County Public Works Department.</p> <ul style="list-style-type: none"> a. All grading and construction on-site shall adhere to the specifications, procedures, and site conditions contained in the final design plans, which shall be fully compliant with the seismic recommendations of the California-registered professional engineer. The procedures and site conditions shall encompass site preparation, foundation specifications, and protection measures for buried metal. b. The final structural design shall be subject to approval and follow-up inspection by the Kern County Public Works Department. Final design requirements shall be provided to the on-site construction supervisor and Kern County Building Inspector to ensure compliance. A copy 	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 4.7-1(c): The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.7-1(d): The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.7-2: The project would result in substantial soil erosion or the loss of topsoil.	Potentially significant	<p>MM 4.7-3: The construction contractor shall incorporate best management practices consistent with the National Pollutant Discharge Elimination System General Construction Permit Program for all construction projects that would not retain all stormwater on-site and the Kern County Grading Code. The project proponent shall prepare or update the existing Erosion and Sedimentation Control Plan as well as a Stormwater Pollution Prevention Plan. The Stormwater Pollution Prevention Plan shall be prepared by a Qualified Stormwater Pollution Prevention Plan Developer and submitted for review and approval by the applicable Regional Water Quality Control Board. The Stormwater Pollution Prevention Plan best management practices shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> a. Scheduling to avoid ground disturbance during rain events to the maximum extent possible; b. Preservation of existing vegetation and topography to the maximum extent practicable; c. Stabilized construction entrances and exits; 	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>d. Erosion control (including all pertinent temporary erosion control practices as specified in Chapter 17.28.140 of the Kern County Grading Code), such as mulching, temporary drains and cullies, sandbag barrier, geotextiles and mats, silt fences, brush or rock filters, earth dikes, straw bale barriers, and sediment traps;</p> <p>e. Sediment control;</p> <p>f. Waste management;</p> <p>g. Good housekeeping; and</p> <p>h. Post-construction site stabilization.</p> <p>Prior to initial construction mobilization, preconstruction surveys shall be performed and sediment and erosion controls shall be installed in accordance with the approved Stormwater Pollution Prevention Plan. A copy of the approved Stormwater Pollution Prevention Plan shall be submitted to the Kern County Planning and Natural Resources Department.</p> <p>MM 4.7-4: Prior to construction, the project proponent shall submit grading plans accompanied by a soils engineering report, engineering geology report, and drainage calculations pursuant to the Kern County Grading Code (Section 17.28.070) to the Kern County Public Works Department in order to obtain required grading permits.</p> <p>Implement MM 4.3-1.</p>	
<p>Impact 4.7-3: The project would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.</p>	<p>Potentially significant</p>	<p>Implement MM 4.7-2.</p>	<p>Less than significant</p>
<p>Impact 4.7-4: The project would be located on expansive soil, as defined in Section 1802.3.2 of the</p>	<p>Potentially significant</p>	<p>Implement MM 4.7-1.</p>	<p>Less than significant</p>

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
California Building Code (1994), creating substantial risks to life or property.			
Impact 4.7-5: 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	No mitigation measures are required.	No Impact
Impact 4.7-6: The project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially significant	<p>MM 4.7-5: If a paleontological resource is found, the project contractor shall cease ground-disturbing activities within 50 feet of the find. The qualified paleontologist shall evaluate the significance of the resources and recommend appropriate treatment measures. At each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples shall be collected and submitted for analysis. Any fossils encountered and recovered shall be catalogued and donated to a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository.</p> <p>Steps to Compliance:</p> <ol style="list-style-type: none"> a. This mitigation measure shall be incorporated as a condition of approval. b. In the event paleontological resources are encountered during the course of grading or construction activities, the project proponent shall retain a qualified paleontologist to evaluate the significance of the resources and recommend appropriate treatment measures. 	Less than Significant
Impact 4.7: Cumulative Impacts	Potentially significant	Implement MM 4.7-1 through MM 4.7-5.	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.8 Greenhouse Gases			
Impact 4.8-1: The project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.8-2: The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.8: Cumulative Impacts	Less than significant	No mitigation measures are required.	Less than significant
4.9 Hazards and Hazardous Materials			
Impact 4.9-1: The project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.9-2: The project could 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	<p>MM 4.9-1: The project proponent shall continuously comply with the following:</p> <ul style="list-style-type: none"> <li>a. The project proponent shall not build any structure within 10 feet of the existing plugged and abandoned well located within the project boundaries. <li>b. Prior to permit approval, the project proponent/operator shall consult with California Geologic Energy Management Division to determine if well testing is necessary to verify that no harmful substances, such as gas or oil, are leaking from the existing plugged wells onsite. If testing is required, the results of the well test shall be submitted to the California Geologic Energy Management Division for review and approval. A copy of California Geological Energy Management Division’s 	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>approval shall be submitted to the Kern County Planning and Natural Resources Department.</p> <p>c. Surveyed locations of wells shall be provided to the California Geologic Energy Management Division in Latitude and Longitude, North American Datum 83 decimal format.</p> <p>d. Any wells found leaking shall be reported to California Geologic Energy Management Division immediately. Any wells that do not meet the aforementioned testing requirements shall be resealed and properly plugged and re-abandoned consistent with California Geologic Energy Management Division requirements. However, if there is evidence of contaminants found during testing, the qualified consultant shall prepare a report detailing the results of the testing and a work action plan to remediate any contamination found and to plug the wells. Any soil containing hydrocarbons shall be disposed of in accordance with local, state, and federal laws. The completed report and work action plan will be submitted to California Geologic Energy Management Division and the Kern County Department of Planning and Natural Resources for comment and review.</p> <p>e. All final stamped and approved project design plans will be provided to the California Geologic Energy Management Division for the record.</p> <p>f. If during construction activities, any new wells are encountered, all work shall cease in the vicinity of the well, and the project proponent would immediately notify the California Geologic Energy Management Division’s construction site well review engineer in the Inland District Office, and file for California Geologic Energy</p>	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Management Division review of an amended site plan with well casing diagrams.			
Impact 4.9-3: The project would not emit hazardous emissions or involves handling hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school.	No impact	No mitigation measures are required.	No impact
Impact 4.9-4: The project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.9-5: The project could expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	Less than significant	Implement MM 4.14-1	Less than significant
Impact 4.9-6: The project could generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste exceeding adopted qualitative thresholds.	Potentially significant	MM 4.9-2: Prior to the issuance of grading or building permits the project proponent shall prepare a Vector Control Plan (Plan), or revise any existing Plan, and submit it to the Kern County Environmental Health Services Division for review and approval. The Plan shall include Best Management Practices such as: good housekeeping measures to minimize harborage for vectors, and the timely incorporation of material into the composting process. Further controls may include the use of traps or other abatement controls, and/or the use of a licensed pest management service, if needed.	Less than significant
Impact 4.9: Cumulative Impacts	Potentially significant	Implement MM 4.9-1 and MM 4.9-2.	Less than significant
4.10 Hydrology and Water Quality			
Impact 4.10-1: The project could violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality.	Potentially significant	MM 4.10-1: Prior to issuance of a grading permit or building permit, the project proponent/operator shall submit an updated Stormwater Pollution Prevention Plan (SWPPP) for review and	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		approval by the Kern County Planning and Natural Resources Department and/or Kern County Public Works Department. The SWPPP shall be designed to minimize runoff and shall specify best management practices to prevent all construction pollutants from contacting stormwater, with the intent of keeping sediment or any other pollutants from moving offsite and into receiving waters. The requirements of the SWPPP shall be incorporated into design specifications and construction contracts.	
Impact 4.10-2: The project would not 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	No mitigation measures are required.	Less than significant
Impact 4.10-3: The project would not 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 result in substantial erosion and/or sedimentation on-site or off-site.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.10-4: The project would not 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 substantially increase the rate or amount of surface runoff which would result in flooding on- or off site.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.10-5: The project would not 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.	Less than significant	No mitigation measures are required.	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 4.10-6: The project would not contribute to inundation by a flood hazard, tsunami, or seiche zones, that would result in risk of release of pollutants.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.10-7: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.10: Cumulative Impacts	Less than significant	Implement MM 4.10-1	Less than significant
4.11 Land Use			
Impact 4.11-1: 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	No mitigation measures are required.	Less than significant
Impact 4.11: Cumulative Impacts	Less than significant	No mitigation measures are required.	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.12 Mineral Resources			
Impact 4.12-1: The project would not 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.	Potentially significant	Implement MM 4.9-2.	Less than significant
Impact 4.12-2: The project would not 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	No mitigation measures are required.	Less than significant
Impact 4.12: Cumulative Impacts	Less than significant	No mitigation measures are required.	Less than significant
4.13 Noise			
Impact 4.13-1: The project could result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Potentially significant	<p>MM 4.13-1: The following measures are to be implemented to further reduce short-term noise levels associated with project construction activities:</p> <ul style="list-style-type: none"> a. Construction equipment shall be fitted with noise-reduction features such as mufflers and engine shrouds that are no less effective than those originally installed by the manufacturer. b. Construction activities at the project site shall comply with the hourly restrictions for noise-generating construction activities, as specified in the County’s Code of Ordinances, Chapter 8.36. Accordingly, construction activities shall be prohibited between the hours of 9:00 p.m. to 6:00 a.m. on weekdays, and between 9:00 p.m. to 8:00 a.m. on weekends. These hourly limitations shall not apply to activities where hourly limitations would result in increased safety risk to workers or the public, such as commissioning and maintenance activities that must occur after dark to ensure photovoltaic arrays are 	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		not energized; unanticipated emergencies requiring immediate attention; or security patrols. c. Haul trucks shall not be allowed to idle for periods greater than 5 minutes, except as needed to perform a specified function (e.g., concrete mixing). d. On-site vehicle speeds shall be limited to 15 miles per hour, or less (except in cases of emergency). e. Back-up beepers for all construction equipment and vehicles shall be broadband sound alarms or adjusted to the lowest noise levels possible, provided that the Occupational Safety and Health Administration and California Division of Occupational Safety and Health safety requirements are not violated. On vehicles where back-up beepers are not available, alternative safety measures such as escorts and spotters shall be employed.	
Impact 4.13-2: The project would not generate excessive groundborne vibration or groundborne noise levels.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.13-3: The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.13: Cumulative Impacts	Potentially significant	Implement MM 4.13-1	Less than significant
4.14 Public Services			
Impact 4.14-1: The project would result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance	Potentially significant	MM 4.14-1: Prior to the issuance of grading or building permits, the project proponent/operator shall develop and implement a Fire Safety Plan for use during construction, operation, and closure of the facility.	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
objectives for fire protection services or law enforcement protection services.		<p>The project proponent/operator 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. The Fire Safety Plan shall contain notification procedures and emergency fire precautions including, but not limited to the following:</p> <ol style="list-style-type: none"> a. All internal combustion engines, both stationary and mobile, 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 will maintain their factory-installed (type) muffler in good condition. c. Fire rules shall be posted on the project bulletin board at the contractor’s field office and 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. f. The project proponent/operator shall make an effort to restrict the use of chainsaws, chippers, vegetation masticators, grinders, drill rigs, tractors, torches, and explosives to periods outside of the official fire season. When the above tools are used, water tanks equipped 	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		with hoses, fire rakes, and axes shall be easily accessible to personnel.	
Impact 4.14: Cumulative Impacts	Potentially significant	MM 4.14-2: Prior to the issuance of grading or building permits, the project proponent shall coordinate with Kern County to determine the need for payment of land development services fees, in accordance with the Kern County Land Development Services Fee Schedule, for impacts to Countywide public protection, sheriff’s patrol and investigative services, and fire services. If payment of land development services fees is determined to be required for the project, the project proponent shall submit evidence of payment to the Kern County Planning and Natural Resources Department prior to issuance of grading or building permits.	Less than significant
4.15 Transportation			
Impact 4.15-1: The project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.15-2: The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.15-3: The project could substantially increase hazards due to a design feature.	Potentially significant	<p>MM 4.15-1: Prior to construction of the new facility entrance, the project proponent shall obtain an encroachment permit from the Kern County Public Works Department requiring construction of an asphalt-concrete paved private road approach along Lokern Road. The location of access will be approved by the Kern County Public Works Department prior to construction.</p> <p>MM 4.15-2: Prior to the issuance of construction or building permits, the project proponent/operator shall:</p> <ul style="list-style-type: none"> a. Prepare and submit a Construction Traffic Control Plan to the Kern County Public Works Department – 	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>Development Review and the California Department of Transportation District 6 offices, as appropriate, for approval. The Construction Traffic Control Plan must be prepared in accordance with both the California Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and must address, at a minimum, the following issues:</p> <ol style="list-style-type: none"> 1. Timing of deliveries of heavy equipment and building materials; 2. Directing construction traffic with a flag person; 3. Placing temporary signing, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic; 4. Ensuring access for emergency vehicles to the project site; 5. Temporarily closing travel lanes or delaying traffic during materials delivery, transmission line stringing activities, or any other utility connections; 6. Maintaining access to the adjacent property; and 7. Specifying both construction-related vehicle travel and oversize load haul routes, minimizing construction traffic during the AM and PM peak hours. <p>b. Obtain all necessary encroachment permits for the use of oversized/overweight vehicles that will utilize Kern County-maintained roads, which may require California Highway Patrol or a pilot car escort. Copies of the approved traffic plan and issued permits shall be submitted to the California Department of</p>	

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>Transportation, Kern County Planning and Natural Resources Department, and Kern County Public Works Department – Development Review.</p> <ul style="list-style-type: none"> c. Enter into a secured agreement with Kern County to ensure that any Kern County roads that are demonstrably damaged by project-related activities are promptly repaired and, if necessary, paved, slurry-sealed, or reconstructed as per requirements of the State and/or Kern County. d. Submit documentation that identifies the roads to be used during construction. The project proponent/operator shall be responsible for repairing any damage to Kern County- and non-Kern County-maintained roads that demonstrably result from construction activities. The project proponent/operator shall submit a preconstruction video log and inspection report regarding roadway conditions for roads used during construction to the Kern County Planning and Natural Resources Department and Kern County Public Works Department – Development Review. e. Within 30 days of completion of construction, the project proponent/operator shall submit a post-construction video log and inspection report to Kern County. This information shall be submitted in an electronic format suitable to the County. Kern County, in consultation with the project proponent/operator’s engineer, shall determine project responsibility for the damage and the extent of remediation required, if any. 	
Impact 4.15-4: The project would not result in inadequate emergency access.	Less than significant	No mitigation measures are required.	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 4.15: Cumulative Impacts	Potentially significant	Implement MM 4.15-1 and MM 4.15-2.	Less than significant
4.16 Tribal Cultural Resources			
Impact 4.16-1a: The project could 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 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	Potentially significant	Implement MM 4.5-1 and MM 4.5-2.	Less than significant
Impact 4.16-1b: The project could cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources 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 Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Potentially significant	Implement MM 4.5-1 and MM 4.5-2.	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 4.16: Cumulative Impacts	Potentially significant	Implement MM 4.5-1 and MM 4.5-2.	Less than significant
4.17 Utilities and Service Systems			
Impact 4.17-1: The project would not 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.	Less than significant	No mitigation measures are required.	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	No mitigation measures are required.	Less than significant
Impact 4.17-3: The project would not result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.17-4: The project would not 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	No mitigation measures are required.	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.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.17: Cumulative Impacts	Less than significant	No mitigation measures are required.	Less than significant

TABLE 1-6: SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.18 Wildfire			
Impact 4.18-1: The project would not substantially impair an adopted emergency response plan or emergency evacuation plan.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.18-2: 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.	Less than significant	No mitigation measures are 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.	Potentially Significant	Implement MM 4.14-1.	Less than significant
Impact 4.18-4: The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes.	Less than significant	No mitigation measures are required.	Less than significant
Impact 4.18: Cumulative Impacts	Potentially Significant	Implement MM 4.14-1.	Less than significant

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2.1 Intent of the California Environmental Quality Act

The Kern County Planning and Community Development Department (Planning Department) is the Lead Agency under the California Environmental Quality Act (CEQA) for this Environmental Impact Report (EIR). The lead agency, as defined by CEQA, is the public agency that has the principal responsibility for carrying out or approving this project.

The lead agency has determined that an EIR must be prepared for the Clean Harbors Waste Management Unit (WMU) Solid Waste Disposal Facility by Clean Harbors Buttonwillow, LLC Project (“project” or “proposed project”). The 640-acre project site is located in western Kern County, approximately 30 miles west of Bakersfield, eight miles west of the unincorporated community of Buttonwillow and approximately six miles north of the unincorporated community of McKittrick. The proposed project is described in detail in Chapter 3, Project Description.

This EIR has been prepared in accordance with requirements of the following documents:

- CEQA (California Public Resources Code [PRC] Section 21000 et seq.),
- The State CEQA Guidelines (CEQA Guidelines), California Code of Regulations (CCR), Title 14, Chapter 3, Section 15000 et seq. and
- Kern County CEQA Implementation Document, dated June 2004.

The overall purposes of the CEQA process are as follows:

- To identify the significant impacts on the environment of a project, identify alternatives, and indicate the manner in which those significant impacts can be avoided or mitigated;
- To provide for full disclosure of the project’s environmental impacts 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
- To provide a forum for public participation in the decision-making process with respect to environmental impacts.

2.2 Purpose of this Environmental Impact Report

Being an informational public document, an EIR is used in the planning and decision-making process. This project-level EIR analyzes the environmental impacts of the project. The Kern County Planning Commission and Board of Supervisors (Board) will consider the information in the EIR, including public comments and responses to those comments, during the public hearing process. It is within the Board’s discretion to certify the EIR and to approve, conditionally approve, or deny the project.

The purpose of an EIR is to identify:

- The significant potential impacts of the proposed project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated,

- Any unavoidable adverse impacts that cannot be mitigated, and
- Reasonable and feasible alternatives to the proposed project that would eliminate any significant adverse environmental impacts or reduce the impacts to 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 that reflects the independent judgment of the lead agency, discloses the level of significance of the impacts both with and without mitigation, and discusses the mitigation measures proposed to reduce the impacts. A Draft EIR (DEIR) 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, checking for accuracy, detecting omissions, discover public concerns, and soliciting counterproposals.

Reviewers of a DEIR 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).

Issues to be Resolved

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

- Determine whether the EIR adequately describes the environmental impacts of the proposed project.
- Choosing among alternatives.
- Determine whether the recommended mitigation measures should be adopted or modified.

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 physical change in the environment, directly or ultimately.
- **Environment** means the physical conditions that exist in the area and that would be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved is where significant direct or indirect impacts would occur as a result of the proposed project. The environment includes both natural and artificial conditions.
- **Impacts** analyzed under CEQA must be related to a physical change. Impacts are:
 - Direct or primary impacts that would be caused by the proposed project and would occur at the same time and place, or
 - Indirect or secondary impacts caused by the proposed project that 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 or population density or the growth rate, or 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 proposed 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 proposed 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 through preservation and maintenance operations during the life of the action; or
 - Compensating for the impact by replacing or providing substitute resources or environments.
- **Cumulative impacts** are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. The following statements also apply when considering cumulative impacts:
 - The individual impacts may be changes resulting from a single project or separate projects, and
 - The cumulative impact from several projects is the change in the environment that results from the incremental impact of the proposed project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

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

- **Less than Significant.** An impact that is adverse but that does not exceed the defined thresholds of significance. Less-than-significant impacts do not require mitigation.
- **Significant.** An impact that exceeds the defined thresholds of significance and would or could cause a substantial adverse change in the environment. For purposes of this EIR “Potentially Significant” has the same meaning as significant. Mitigation measures or project alternatives are necessary to avoid 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 avoided or reduced to a less-than-significant level through implementation of mitigation measures or project alternatives.

2.4 Decision-Making Process

CEQA requires lead agencies to solicit and consider input from other interested agencies, organizations, 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 proposed project and an opportunity to provide comments. In accordance with CEQA,

there are several points at which the public can participate in the decision-making process. These are outlined below.

- ***Initial Study/Notice of Preparation (IS/NOP)***. The lead agency prepared and circulated an IS/NOP in June 2020 to responsible, trustee, and local agencies for the purpose of receiving comments on the scope and contents of the EIR. The IS/NOP was recirculated in August 2021. The IS/NOP and comments received during the NOP scoping periods are included in Appendix A of this EIR.
- ***DEIR /Notice of Availability (NOA)***. The DEIR is circulated for review and comment to public agencies and the general public. In accordance with Section 15105 of the State CEQA Guidelines, the lead agency will provide for a 45-day public review period on the DEIR. An NOA is published and sent to appropriate agencies, and to individuals and organizations who have requested notice. The DEIR is sent to the State Clearinghouse for review by state agencies.
- ***Preparation and Certification of Final EIR***. Following the public comment period, Kern County will respond to each environmental comment on the DEIR received in writing. Those responses will be made available two weeks before the scheduled hearing before the Board. The comments, responses to comments, and the DEIR, along with any minor revisions to the DEIR, shall comprise the Final EIR. The Board will consider the Final EIR, all public comments, and the project and take final action on the project. The Board will hold at least one public hearing to consider the Final EIR, take public testimony, and then approve, conditionally approve, or deny the project.
- ***Preparation of Notice of Determination (NOD)***. In accordance with CEQA Guidelines Section 15094 (*Notice of Determination*), within five working days following certification of the Final EIR, Kern County shall prepare and file the NOD with the County Clerk and the State Clearinghouse. The NOD, which notifies the public that Kern County has certified the Final EIR, will be posted for at least 30 days.

Notice of Preparation/Initial Study

Pursuant to Section 15082 of the State CEQA Guidelines, as amended, the Kern County Planning and Community Development Department circulated the IS/NOP to responsible and affected agencies and other interested parties for a 30-day public review period that began on June 22, 2020 and ended on July 21, 2020. The IS/NOP was circulated again for a 30-day public review period that began on August 2, 2021 and ended on August 25, 2021. The IS/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 Planning and Research to solicit statewide agency participation in determining the scope of the EIR (State Clearinghouse # 2020069034). The purpose of the IS/NOP was to convey formally that the Kern County Planning and Community Development Department, as the lead agency under CEQA, solicited input regarding the scope and proposed content of the EIR. The IS/NOP and all comment letters are provided in Appendix A of this EIR.

Scoping Meetings

Pursuant to Section 15206 of the State CEQA Guidelines, the lead agency is required to conduct at least one scoping meeting for all projects of statewide, regional, or area-wide significance. 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. The lead agency held a virtual scoping meeting on July 10, 2020, following the release of the June 22, 2020, NOP. A second scoping meeting was held on August 16, 2021, following the release of the July 23, 2021, NOP.

Scoping Comments

11 comment letters were received during the 2020 scoping period. 11 comment letters were received during the 2021 scoping period. The IS/NOP and all comments received are included in Appendix A, along with the summary of proceedings from the scoping meeting.

The lead agency received the following specific environmental concerns listed in Table 2-1 in response to the IS/NOP.

TABLE 2-1: LIST OF COMMENTS

Commenter	Summary of Comment
2020 Scoping Period	
Julie A. Vance, Regional Manager. California Department of Fish and Wildlife. July 21, 2020	States the proposed project should evaluate impacts to potential listed wildlife and plant species located in or nearby the project site. The comment also states the proposed project should discuss potentially significant impact to State resources occurring on Lokern Ecological Reserve and impacts that could result in loss of riparian and wetland vegetation. The comment recommends that potential direct and indirect impacts to stream and riparian habitat be analyzed according to each project activity.
Christine Karl, Environmental Scientist, Permitting & Assistance Branch, North Section Waster Permitting, Compliance, & Mitigation Division. Department of Resources Recycling and Recovery (CalRecycle). July 21, 2020. Duplicate sent on August 20, 2021	States the proposed project description is unclear concerning the expansion for non-hazardous waste disposal will consist of receiving solid waste generated off site and what the waste types and volumes will be allowed for disposal.
Lorena Mendibles, Chief Transportation Planning. California Department of Transportation. July 20, 2020	Stated the proposed project should prepare a Traffic Impact Study to evaluate potential impact and identify adequate mitigation measures.
Parampreet Bhatti, Hazardous Substances Engineer. Department of Toxic Substance Control. July 20, 2020	States the DTSC will continue consultation to develop a robust description of DTSC’s discretionary action to be included in the Draft EIR and subject to the Draft’s EIR’s analysis.
Mary C. Barlow, County Superintendent of Schools, and Andrea Watson, Specialist, School District Facility Services. Kern County Superintendent of Schools. June 18, 2020	States the proposed project will have no significant effects on Buttonwillow Elementary and Kern High School Districts so long as statutory school fees, if any, are collected as required by law and that no further mitigation is necessary.
Tom Frantz, President. Association of Irrigated Residents. July 21, 2020.	States concerns to be further discussed in the EIR, including: disturbance of natural habitat, wastewater impacts, permit and operation violations, cultural and tribal cultural resource impacts, traffic impacts, air quality and emissions, history of hazardous waste, storage of hazardous waste, utilities, personal health and safety, and projected number of employees.

TABLE 2-1: LIST OF COMMENTS

Commenter	Summary of Comment
Ellen Cypher. California Native Plant Society . July 20, 2020.	States concern over the surrounding land use that is not recognized as a nature conservation. The comment also states that an adjacent parcel to the proposed project is known to contain federal and/or state-listed threatened species and the NOP did not analyze the impacts to listed wildlife and plant species.
Bradley Angel, Executive Director of Greenaction for Health and Environmental Justice, Maricela Mares Alatorre, Coordinator. El Pueblo Para el Aire y Agua Limpia/ People for Clean Air and Water of Kettleman City . August 24, 2021. July 9, 2020	States the proposed project had inadequate notice from the County. The comment also states that the NOP did not include enough information about the purpose of the EIR, did not provide access for limited and Non-English speaking person, and request for scoping meetings to be held during the evenings.
Bradley Angel, Executive Director, Greenaction for Health and Environmental Justice . Maricela Mares Alatorre, Coordinator. El Pueblo Para el Aire y Agua Limpia/ People for Clean Air and Water of Kettleman City . Caroline Farrel, Executive Director, Center on Race, Poverty and the Environment . Nayamin Martines, Director. Central California Environmental Justice Network. July 21, 2020	States several comments to be addressed including: <ul style="list-style-type: none"> • Inadequate scheduling of scoping meetings; • Inadequate language for project description and purpose of EIR; • Provide language access for limited and Non-English speaking residents; • Cumulative impacts; • Traffic impacts; • Air Quality; • Climate Change; • Covid-19 safety; • Permit regulation; and • Use of Statement of Overriding Consideration.
Franklin Bedard, Conservation Chair. Kern Audubon Society . July 20, 2020. Duplicate sent on August 20, 2021	States the proposed project should evaluate impacts to protected wildlife that may utilize the undeveloped saltbush scrub habitat area.
Belridge Water Storage District . January 20, 2020	A memorandum of agreement between Belridge Water Storage District and Clean Harbors Buttonwillow, LLC, is provided.
2021 Scoping Period	
Nancy Gonzalez-Lopez, Cultural Resources Analyst. California Native American Heritage Commission . June 23, 2020. Duplicate sent on July 26, 2021.	States that consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project should be done as early as possible to avoid inadvertent discoveries of Native American human remains and tribal cultural resources. Consultation with legal counsel about compliance with AB 52 and SB 18 as well as compliance with other applicable laws is required.

TABLE 2-1: LIST OF COMMENTS

Commenter	Summary of Comment
Transmission Department. SoCalGas . August 9, 2021	States that SoCalGas does not have any gas transmission facilities within the vicinity of the project area.
Christine Karl, Environmental Scientist, Permitting and Assistance Branch – North Unit, Waste Permitting, Compliance and Mitigation Division. CalRecycle . August 20, 2021.	Questions whether the waste types would be disposed with Class 1 or Class 2-3 disposal units. The commenter further states that the facility has a registration tier permit and may require a Full Solid Waste Facilities Permit.
Brian Clements, Director of Permit Services. San Joaquin Valley Air Pollution Control District . August 24, 2021.	<p>States several comments to be addressed including:</p> <ol style="list-style-type: none"> 1) Criteria Pollutant Emissions: Address project construction and operational air emissions separately; project impacts be mitigated to below thresholds, recommends the use of CalEEMod for quantifying air emissions 2) Health Risk Screening/Assessment: A health risk screening and/or assessment should be performed. 3) Ambient Air Quality Analysis: Recommends that the EIR require an AAQA to be performed from both project-specific permitted and non-permitted activities. Recommends the consultation with District staff to determine the appropriate model and input data to use in the analysis. 4) Voluntary Emissions Reduction Agreement: EIR include a feasibility discussion on implementing a VERA if the project is expected to have a significant impact. 5) Truck Routing: Truck routing evaluation must be carried out. 6) Cleanest Available HHD Trucks: Recommends the use of cleanest HHD trucks and zero-emissions technologies for all on-site service equipment. 7) Recommends reduction in idling of HHD trucks 8) Electric On-site Off-Road and On-Road Equipment: EIR stipulate requirements for future project proponents to utilize electric or zero-emissions off-road and on-road equipment for the project 9) Solar Deployment in the Community: Consider the incorporation of solar power systems to reduce project emissions

TABLE 2-1: LIST OF COMMENTS

Commenter	Summary of Comment
	<ul style="list-style-type: none"> 10) Electric Vehicle Charger: Recommends the installation of vehicle chargers at the project site 11) Nuisance odors: Recommends an Odor Control Plan (OCP) as a mitigation measure in EIR. 12) District Rules and Regulations: Compliance with all the District Rules and Regulations would be required. 13) Additional Air Quality Evaluation and Discussion to include in the EIR: Modelling outputs be provided as appendices in EIR, a discussion of components and phases of the project and the associated emissions, and a discussion on whether the project would result in a cumulatively considerable net increase in any criterial pollutant and a discussion on how the project will conform to the Court’s holding in Sierra Club v. County of Fresno.
<p>Brian Blasé. Kern County Public Works Department. August 2, 2021.</p>	<p>The commenter states that the proposed project property is subject to flooding.</p>
<p>Mark Gilkey, Executive Director. Westside Water Authority. August 6, 2021.</p>	<p>States that the proposed project is not in a Water Quality Control Board Plans or Sustainable Groundwater management Plans. The Facility is covered by the Westside District Water Authority’s Management Plan within Kern Groundwater Authority’s Groundwater Sustainability Plan through an agreement with Belridge Water Storage District.</p>
<p>Franklin Bedard, Conservation Chair. Kern Audubon Society. August 20, 2021</p>	<p>States that the proposed DEIR should identify and evaluate adverse impacts to protected wildlife that may utilize the undeveloped saltbush scrub habitat area, proposed for stockpiling soil from construction activities. Further states that the biological site assessment should be performed by qualified biologists during years exhibiting average winter precipitation.</p>
<p>Dayana Torress, EHS In-Training. Kern County Public Health Services Department. October 26, 2021</p>	<p>States that the Kern County Environmental Health Division is the local regulatory authority that will enforce state regulations and local codes as they relate to waste discharge, water supply requirements, and other items that may affect the health and safety of the public. Furthermore, the Division requests that an account be created on California EPA, the method for water supply and sewage disposal be approved for the KCEHD and contact the Land and Water Division for permitting and destruction procedures if any abandoned wells are found on site.</p>

TABLE 2-1: LIST OF COMMENTS

Commenter	Summary of Comment
<p>Evelyn Elizalde, REHS, Land, Water and Pools Program. Kern County Public Health Services Department, Environmental Health Division. July 23, 2021. Duplicate sent on October 25, 2021.</p>	<p>States the project needs to better define the Solid Wastes the applicant is requesting to receive. Further states that a co-disposal registration tier permit will be required if the facility is co-disposing the non-hazardous waste with the Class 1 hazardous waste. A Full Solid Waste Facilities permit will also be required if the facility is disposing the non-hazardous waste separate from Class I hazardous waste landfill.</p>
<p>Bradley Angel, Executive Director, Greenaction for Health and Environmental Justice. Maricela Mares Alatorre, Coordinator. El Pueblo Para el Aire y Agua Limpia/ People for Clean Air and Water of Kettleman City. August 24, 2021.</p>	<p>States comments on Notice of Preparation of a DEIR for the proposed project:</p> <ul style="list-style-type: none"> • Clear violation of language access and of Civil Rights of Latino Spanish-Speaking Residents • Improper delay in the permit process for a Facility operating on an Expired Permit • Pre-Determined permit decision is not proper • Increased diesel truck emissions and increased truck traffic is unacceptable • Greenhouse gas emissions and climate change • Hydrology and water quality • State of California’s CalEnviroScreen 4.0 confirms Buttonwillow residents are extremely vulnerable to pollution compared to rest of the state • Civil Rights Laws and Policies must be compiled with
<p>Andrew Green, Cultural Resources Analyst. NAHC. July 26, 2021</p>	<p>States that consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project should be done as early as possible to avoid inadvertent discoveries of Native American human remains and tribal cultural resources. Consultation with legal counsel about compliance with AB 52 and SB 18 as well as compliance with other applicable laws is required.</p>

Availability of the Draft EIR

This DEIR 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 DEIR and the full administrative record for the proposed project, including all studies, are available for review during normal business hours, Monday through Friday, at the following location:

Kern County Planning and Community Development Department
 2700 M Street, Suite 100
 Bakersfield, CA 93301-2370

Phone: (661) 862-8600

Fax: (661) 862-8601

2.5 Format and Content

This DEIR, which addresses the potential environmental impacts of the proposed project, was prepared following input from the public and responsible and affected agencies through the EIR scoping process discussed previously. The contents of this DEIR are based on the findings in the IS/NOP and public and agency input. According to the findings of the IS/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
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Public Services
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities
- Wildfire

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 DEIR:

- Population and Housing
- Recreation

No further discussion of these topics is warranted in this document.

Required EIR Content and Organization

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

TABLE 2-2: 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)	Chapters 1 and 3
Significant environmental impacts (Section 15126.2)	Chapters 1, 4, and 5
Environmental setting (Section 15125)	Chapter 4

TABLE 2-2: REQUIRED EIR CONTENTS

Requirement (CEQA Section)	Location in EIR
Mitigation measures (Section 15126.4)	Chapters 1 and 4
Cumulative impacts (Section 15130)	Chapters 1, 4, and 5
Alternatives to the proposed project (Section 15126.6)	Chapter 1 and 6
Growth-inducing impacts (Section 15126.2)	Chapters 1 and 5
Effects found not to be significant (Section 15128)	Chapters 1, 4, and 5
Significant, irreversible changes (Section 15126.2)	Chapters 1 and 5
Unavoidable significant environmental impacts (Section 15126.2)	Chapters 1, 4, and 5
List of preparers and persons consulted (Section 15129)	Chapter 9
References (Section 15129)	Chapters 10
Acronyms and abbreviations	Chapter 11

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

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

- Chapter 10, “Acronyms and Abbreviation,” lists the acronyms and abbreviations in the DEIR.
- Appendices provide information and technical studies that support the environmental analysis contained within the DEIR.

The analysis of each environmental category in Chapter 4 is organized as listed below.

- “Introduction” provides a brief overview on the purpose of the section being analyzed with regard to the proposed project.
- “Environmental Setting” describes the physical conditions that exist at this time and that may influence or affect the topic being analyzed.
- “Regulatory Setting” provides 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 proposed project in each category, presents the determination of the level of significance, and provides a discussion of feasible mitigation measures to reduce any significant impacts.

2.6 Responsible and Trustee Agencies

Projects or actions undertaken by the lead agency—in this case, the Kern County Planning and Community Development Department—may require subsequent oversight, approvals, or permits from other public agencies 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 and trustee agencies are defined as follows:

- A *responsible agency* is a public agency that proposes to carry out or approve a project 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 with a particular interest in the proposed project are outlined below.

State or Regional Agencies

California Department of Toxic Substance Control (DTSC)

Local Agencies

San Joaquin Valley Air Pollution Control District (SJVAPCD)

Kern County

Kern County Planning and Community Development Department (Planning Department)

Kern County Engineering Surveying and Permit Services Department

Kern County Environmental Health Services Division (KCEHSD) - (Local Enforcement Agency [LEA] for CalRecycle)

Kern County Fire Department (KCFD)

Kern County Waste Management 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 available for public review at the Kern County Planning and Community Development Department. A brief synopsis of the scope and content of these documents is provided below.

Kern County General 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 County officials who make decisions that affect 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, which was designed to protect and further the public interest as related to Kern County's growth and development, and 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 General Plan designates the project site (both east and west parcels) as Solid Waste Facilities.

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 throughout the unincorporated area of Kern County. The specific purposes of this title are listed below.

- Provide 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 according to the number, size, and location 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.
- Provide for the enforcement of the regulations of Chapter 19.02.

2.8 Sources

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

Kern County Planning and Community Development Department
2700 M Street, Suite 100
Bakersfield, CA 93301-2370

This EIR is also available on the Kern County Planning and Community Development Department website (<http://www.co.kern.ca.us/planning/eirs.asp>). It is also available at the following libraries:

Kern County Library – Buttonwillow Branch
116 Buttonwillow Drive
Buttonwillow, CA 93206

Kern County Beale Memorial Library
701 Truxtun Avenue
Bakersfield, CA 93301
California State University Bakersfield – Library
9001 Stockdale Highway
Bakersfield, CA 93309

3.1 Introduction

This Environmental Impact Report (EIR) has been prepared by Kern County Planning and Natural Resources Department (County), the Lead Agency, to identify and evaluate potential environmental impacts associated with implementation of certain proposed modifications to the existing Treatment, Storage, and Disposal Facility (Facility) operated by Clean Harbors Buttonwillow, LLC in Buttonwillow, CA (the project). The project includes an application for local land use entitlements necessary for expanded solid waste disposal operations at Clean Harbors' existing permitted Facility, as well as certain modifications to the Facility's existing permitted hazardous waste operations, as described below. Land use authorizations for the Facility were originally approved by the Kern County Board of Supervisors in 1982. Modifications to Conditional Use Permit (CUP) 4 were approved on December 12, 1994, November 30, 2004, July 13, 2010, and December 16, 2014 by both the Kern County Planning Commission and Kern County Board of Supervisors. The current CUP No. 4, Map No. 97 is included as Appendix L. The existing Hazardous Waste Facility Permit is administered by the California Department of Toxic Substances Control (DTSC) and included as Appendix M.

Kern County's authorization specifically includes consideration of:

1. Amendment to the Kern County General Plan of approximately 320 acres (on parcel 099- 251-32) from the existing 8.3 (Extensive Agriculture, 20 min acres) land use designation to a 3.4 (Solid Waste Disposal Facility) designation;
2. Amendment to the Kern County General Plan Appendix E Map, "Petroleum Waste Management" to show the current "Clean Harbors" name and revised permitted Facility boundary, with designated buffer property areas;
3. Zone Classification change of 640 acres (parcels 099-290-17 and 099-251-32) from A (Exclusive Agriculture) to M-3 (Heavy Industrial);
4. Application for removal of both parcels (640 acres) from Agricultural Preserve No. 2; and
5. Modification of the existing CUP No.4, Map No. 97 to include:
 - a. an increase in the permitted Facility boundary from 320 acres to 640 acres to include the expansion parcel for a soil stockpile area;
 - b. an increase in permitted disposal area from 160 disposal acres to 193.3 acres for the addition of non-hazardous waste landfill units [Waste Management Unit (WMU) 36, 37, 38] within existing Facility boundary;
 - c. an increase in permitted disposal capacity from 13,250,000 cubic yards to 16,674,000 cubic yards for the addition of non-hazardous waste landfill units (WMU 36, 37, 38) within existing Facility boundary;
 - d. construction of four (4) new hazardous waste tank treatment buildings (TTBs) to support proposed modifications to a Hazardous Waste Facility Permit renewal application as required by DTSC;

- e. Construction of four (4) new hazardous waste drum storage buildings (DSBs) to support the operation of the new tank treatment buildings; and
- f. construction of one latex paint recycling building.

Kern County will prepare an Environmental Impact Report (EIR), pursuant to section 15161 of the State CEQA Guidelines due to possible new significant impacts.

The document includes inter-agency collaboration protocols regarding environmental review and preparation of the EIR in support of modification of the County Conditional Use Permit CUP No. 4, Map No. 97 and DTSC's Hazardous Waste Facility Permit renewal process.

A decision will then be made by DTSC, as a Responsible Agency, to take action within its approving authority on the proposed renewed authorization of the Hazardous Waste Facility Permit (Appendix N). While the Hazardous Waste Facility Permit renewal application does not include an increase in the hazardous waste capacity, the scope of the proposed permit includes renewed authorization for existing facilities and operations, with the following modifications:

1. Reclassification of existing tank units to miscellaneous units;
2. Construction and operation of four TTBs where treatment is conducted within the existing Facility and reorganizing operations to use the new TTBs, including the construction of a new bulk container storage pad area for waste that is pending verification; construction of four new DSBs to support the TTBs operation; and
3. Addition of environmental monitoring programs consistent with current regulatory standards.

3.2 Project Location

The proposed project is situated in the southern San Joaquin Valley in Kern County, California; refer to **Figure 3-1, Project Vicinity Map**, below. The project site includes Clean Harbors' existing solid and hazardous waste treatment, storage and disposal Facility located in central Kern County at 2500 West Lokern Road, Buttonwillow, California, approximately 8 miles west of Buttonwillow, on the northern side of Lokern Road, on Assessor's Parcel Numbers (APNs) 099-290-17, and the proposed expansion area on APN 099-261-32. APN 099-290-17 is approximately 316 acres; APN 099-261-32 is approximately 320 acres.

As shown in **Figure 3-2, Project Site Boundary Map**, below, the project site is primarily accessible from existing State Highway 33 (SR-33), via Lokern Road.

The project site is located in Sections 15 and 16 of Township 29 South, Range 22 East, of the Mount Diablo Base and Meridian (MDB&M) and is within the U.S. Geological Survey (USGS) 7.5-minute series LOKERN, California, topographic quadrangle.

3.3 Project Objectives

In accordance with Section 15124 of the CEQA *Guidelines*, the project applicant has identified the following project objectives:

Non-Hazardous Waste Objectives

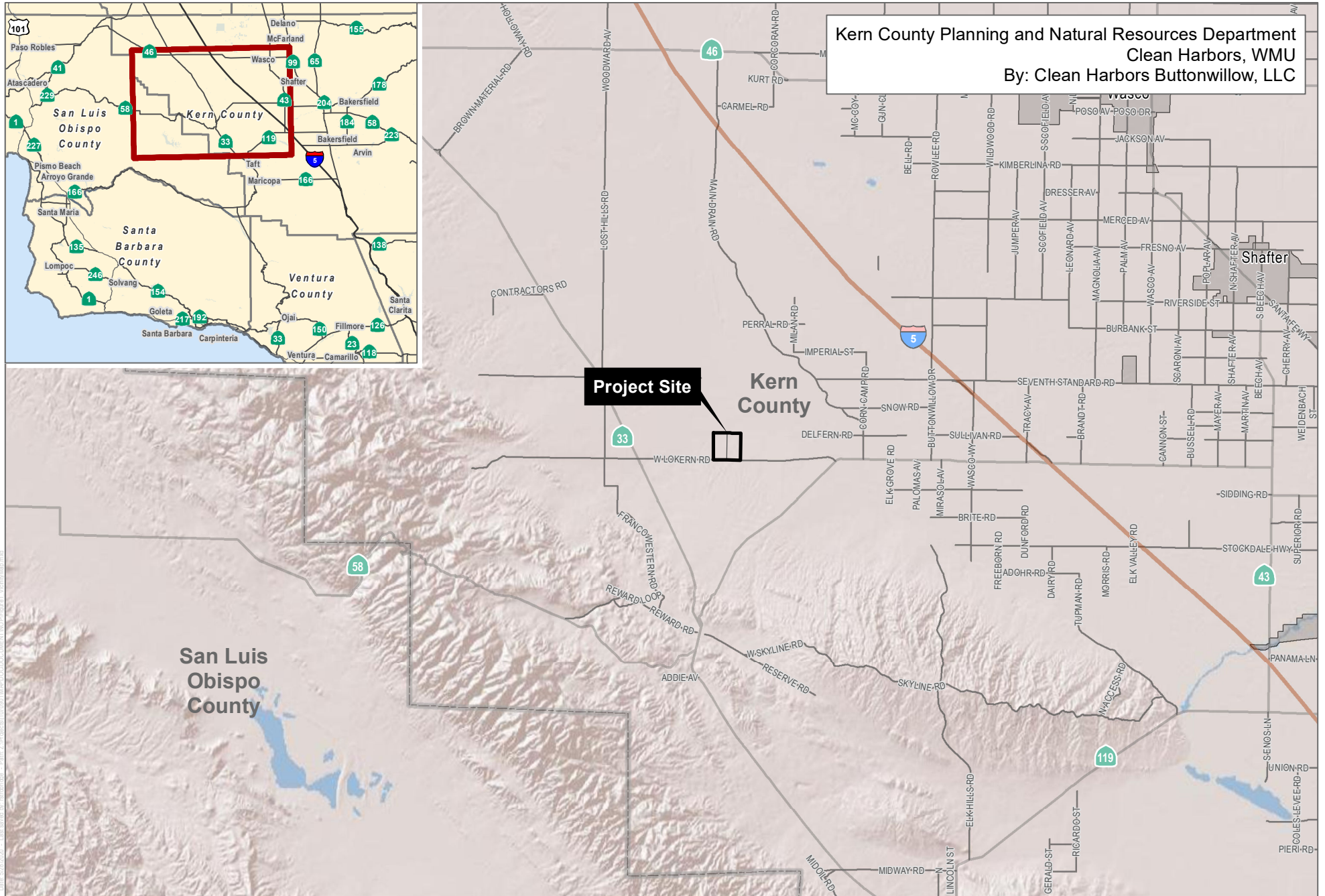
- Modify the Facility’s existing CUP to include new Class II non-hazardous solid waste landfills to reduce the disposal of non-hazardous wastes into hazardous waste landfills, thus preserving the life of the hazardous waste landfills;
- To expand the daily non-hazardous vehicle tonnage limit to support current and future operations;
- Modify the Facility’s existing CUP to expand the permitted Facility boundary to include an area that can be used to store stockpiles of borrow soil that can be used in the future as cover material in the non-hazardous and hazardous waste landfills; beneficial use of these soils avoids the need to dispose of the soils and reduces the need to import soils for cover;
- Support the State’s goal of increasing recycling of latex paint by providing collecting and consolidating capacity to support the PaintCare program at the Buttonwillow Facility;
- To provide clarity of definitions and expanded activities allowed under the CUP; and
- To continue to provide economic benefits to Kern County through employment of local residents, via expansion of operational activities and construction of new processing equipment, which has the potential to create new job opportunities.

Hazardous Waste Objectives

- To make a determination on the Application for a Hazardous Waste Facility Permit submitted to the DTSC.
- Construct four new hazardous waste TTBs and DSBs at the Facility thereby allowing required hazardous waste treatment operations to be conducted in state-of-the-art facilities that provide a greater level of protection to human health and the environment.

The document includes inter-agency collaboration protocols regarding environmental review and preparation of the Environmental Impact Report (EIR) in support of modification of the County Conditional Use Permit CUP No. 4, Map No. 97 and DTSC’s hazardous waste permit decision process.

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Kern County Planning and Natural Resources Department
 Clean Harbors, WMU
 By: Clean Harbors Buttonwillow, LLC

Project Site

Kern County

Shafter

San Luis Obispo County

SOURCE: ESRI 2019

2020

DUDEK



FIGURE 3 1
Project Vicinity Map
 Clean Harbors

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Kern County Planning and Natural Resources Department
Clean Harbors, WMU
By: Clean Harbors Buttonwillow, LLC



SOURCE: NAIP 2016

2020

DUDEK



0 1,000 2,000 Feet

FIGURE 3 2
Project Site Boundary Map

Clean Harbors

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3.4 Environmental Setting

3.4.1 Regional Setting

Kern County is California's third largest county in land area, encompassing approximately 8,202 square miles and has an estimated total population of 908,107 as of January 1, 2022 (DOF 2023). The County is bounded by Kings, Tulare, and Inyo counties to the north; San Bernardino County to the east; Los Angeles and Ventura counties to the south; and Santa Barbara and San Luis Obispo counties to the west. The County's geography is diverse, containing mountainous areas, agricultural lands, and desert areas. These areas are generally divided into three regions: the Valley Region, the Mountain Region, and the Desert Region. The project site is located within the Valley Region, which is characterized by relatively low rainfall, relatively high average summer temperatures, and generally mild winters.

The dominant land use within the County is agriculture, although over the last few decades, urban development has occurred in and around the County's 11 incorporated cities. Bakersfield is the County's largest City, with an estimated population of approximately 407,491 persons as of January 1, 2022 (DOF 2023). The project site is located approximately 25 miles west of the Bakersfield city limits (31 miles west of downtown Bakersfield), approximately 8 miles west of Buttonwillow, approximately 15 miles south of Lost Hills, approximately 7 miles north of McKittrick, and approximately 20 miles north of Taft.

3.4.2 Surrounding Land Uses and Project Site Conditions

Project Site and Surrounding Land Uses

The site is bordered to the north by agricultural land, which historically has included pistachios and alfalfa, and to the west, south and east by oil production and undeveloped land, see **Table 3-1: Project Site and Surrounding Land Uses**, below, for additional detail. The nearest residential area is located approximately 2.5 miles northeast of the project site. The nearest residentially populated area to the project site is in the unincorporated community of McKittrick, approximately 7 miles to the south and Buttonwillow, approximately 8 miles to the east.

Per **Figure 3-3, FEMA Flood Zone Map**, below, the majority of the project site is located within the "X" flood Zone with a 0.2-percent-annual-chance (or 500-year) flood chance (as designated by the Flood Insurance Rate Map (FIRM) issued by the Federal Emergency Management Agency (FEMA)). A small portion of the project site is located within the existing designated 100-year Special Flood Hazard Area (SFHA) flood zone.

The existing permitted Facility portion of the project site is extensively disturbed and developed with a solid and hazardous waste Facility that has been in continuous operation since being permitted via conditional use permit in 1982. The Facility is an existing commercial waste management Facility that accepts solid, semi-solid, and liquid hazardous and non-hazardous wastes for treatment, storage, or disposal, see Section 3.6 for more details. The Facility is located on APN 099-290-17. The proposed expansion area is undeveloped and is located on APN 099-251-32.

Similar to the regional topography, the project site is relatively flat with a gentle downward slope to the northeast with elevations ranging from approximately 335 feet above mean sea level (msl) near the northeast corner to 415 feet above msl near the southwest site boundary.

Table 3-1 provides existing land uses and zoning classifications of the project site and surrounding area.

TABLE 3-1: PROJECT SITE AND SURROUNDING LAND USES

Direction	Existing Land Use	Existing Map Code Designation	Existing Zoning Classifications
Project Site Existing 099-290-	Developed with Commercial Landfill Facility	3.4 (Solid Waste Disposal Facility) 8.3/2.5 (Extensive Agriculture, 20 acre min, Flood Hazard)	A (Exclusive Agriculture)
Project Site Existing,	Undeveloped Land	8.3 (Extensive Agriculture) (min. 20- or 80-acre parcel size)	A (Exclusive Agriculture)
North	Farming Crops (Pistachios, alfalfa) and high desert vegetation	8.1 (Intensive Agriculture , 20 acre min); 8.3/2.5 (Extensive Agriculture, 20 acre min, Flood Hazard); 8.3 (Extensive Agriculture, 20 acre min);	A (Exclusive Agriculture)
South	Oil and Gas Production and Undeveloped Desert Land	8.1/2.5(Intensive Agriculture , 20 acre min, Flood Hazard) 8.3 (Extensive Ag, 20 acre min)	A (Exclusive Agriculture)
East	LoKern Road, Oil and Gas Production and Undeveloped Desert Land	8.1 (Intensive Agriculture , 20 acre min); 8.3/2.5 (Extensive Agriculture, 20 acre min, Flood Hazard); 8.3 (Extensive Agriculture, 20 acre min);	A (Exclusive Agriculture)
West	Oil and Gas Production and Undeveloped Desert Land	8.1 (Intensive Agriculture , 20 acre min) 8.3 (Extensive Ag, 20 acre min); 8.3/2.5 (Extensive Agriculture, 20 acre min, Flood Hazard);	A (Exclusive Agriculture)

The project would be served by the Kern County Sheriff’s Office (KCSO) for law enforcement and public safety, Kern County Fire Department (KCFD) for fire protection, and Kern County Medical Emergency Service for emergency medical and rescue services. The closest KCSO Substation is the Buttonwillow substation, 181 E.1st Street, Buttonwillow, CA located approximately 8.1 miles east of the project site. The nearest KCFD fire station that would serve the project is Station No. 25 (Buttonwillow), located at 100 Mirasol Avenue, Buttonwillow CA in the community of Buttonwillow, approximately 8.1 miles east of the project site. The nearest school to the project site is Buttonwillow Elementary at 42600 Hwy 58, Buttonwillow CA, located approximately 7.7 miles east in the community of Buttonwillow.

Project Land Use Designation and Zoning

Kern County General Plan

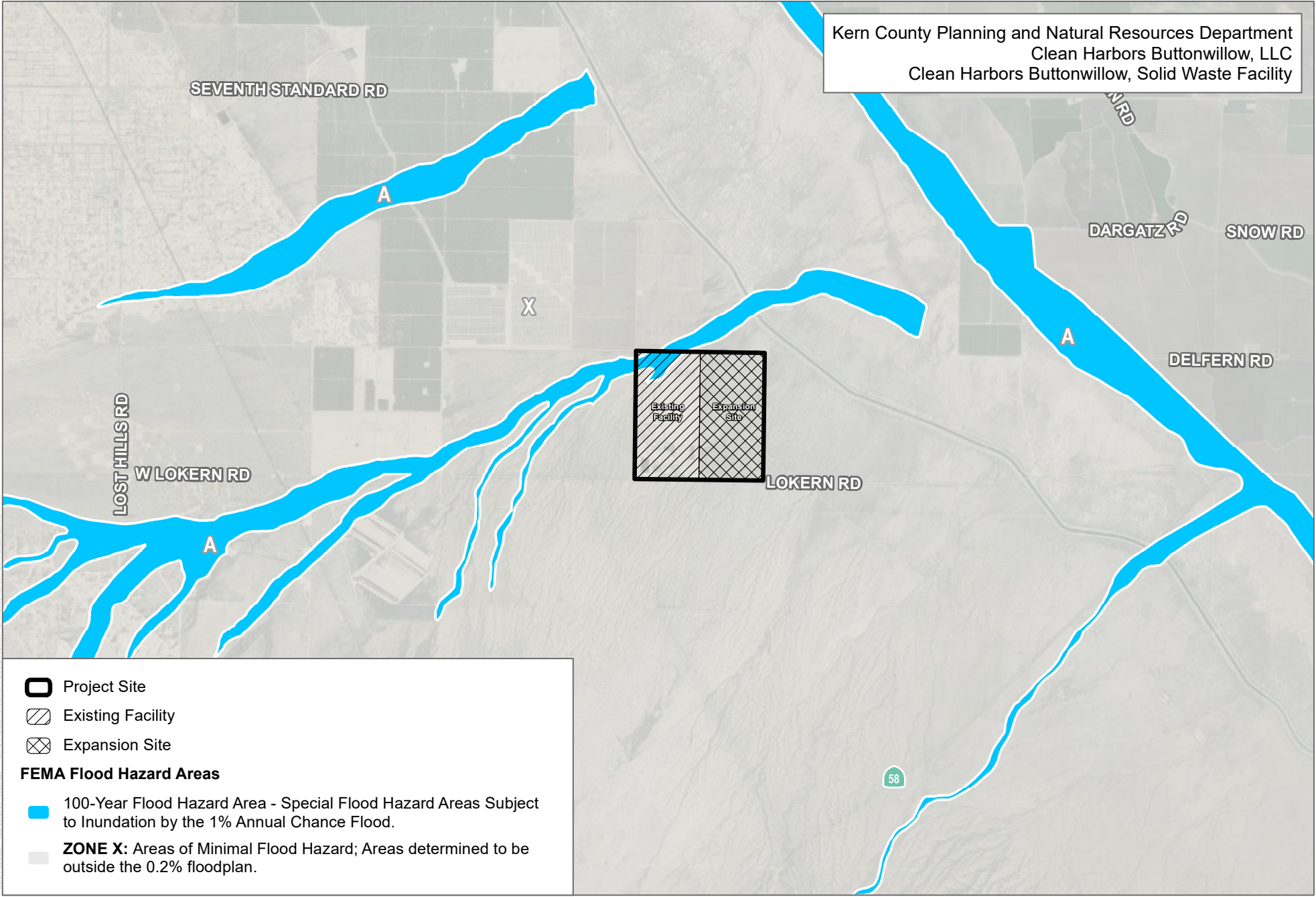
The project site is located within Kern County and is therefore subject to the Kern County General Plan (KCGP). The KCGP is a policy document with land use maps and related information. It is designed to give long-range guidance to County officials who make decisions that affect growth and resources in

unincorporated Kern County, excluding the metropolitan Bakersfield planning area. The KCGP helps to ensure that day-to-day decisions conform to the long-range program, which was designed to protect and further the public interest as related to Kern County's growth and development, and mitigate environmental impacts. The KCGP also serves as a guide to the private sector of the economy so that development initiatives conform to Kern County's public plans, objectives, and policies. The KCGP designates the existing Facility portion of the project site as 3.4 Solid Waste Facilities and the expansion area as 8.3 Extensive Agriculture (Min. 20- or 80-acre parcel size) (see **Table 3-1: Project Site and Surrounding Land Uses** and **Figure 3-4, Existing General Plan Designations**).

According to the KCGP, Solid Waste Facilities (3.4) land use designation applies to areas which are owned by a solid waste disposal facility, within 1,320 feet of a permitted disposal area. Extensive Agriculture (8.3) land use designation applies to areas devoted to agriculture uses involving large areas of land with relatively low value-per acre yields. Typical uses include livestock grazing, farming, and woodlands. The minimum allowable parcel size in the Extensive Agriculture category is 20 acres gross, except lands subject to a Williamson Act Contract/farmland Security zone Contract, in which case the minimum parcel size is 80 acres gross.

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Kern County Planning and Natural Resources Department
 Clean Harbors Buttonwillow, LLC
 Clean Harbors Buttonwillow, Solid Waste Facility



- Project Site
- Existing Facility
- Expansion Site

FEMA Flood Hazard Areas

- 100-Year Flood Hazard Area - Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood.
- ZONE X:** Areas of Minimal Flood Hazard; Areas determined to be outside the 0.2% floodplan.

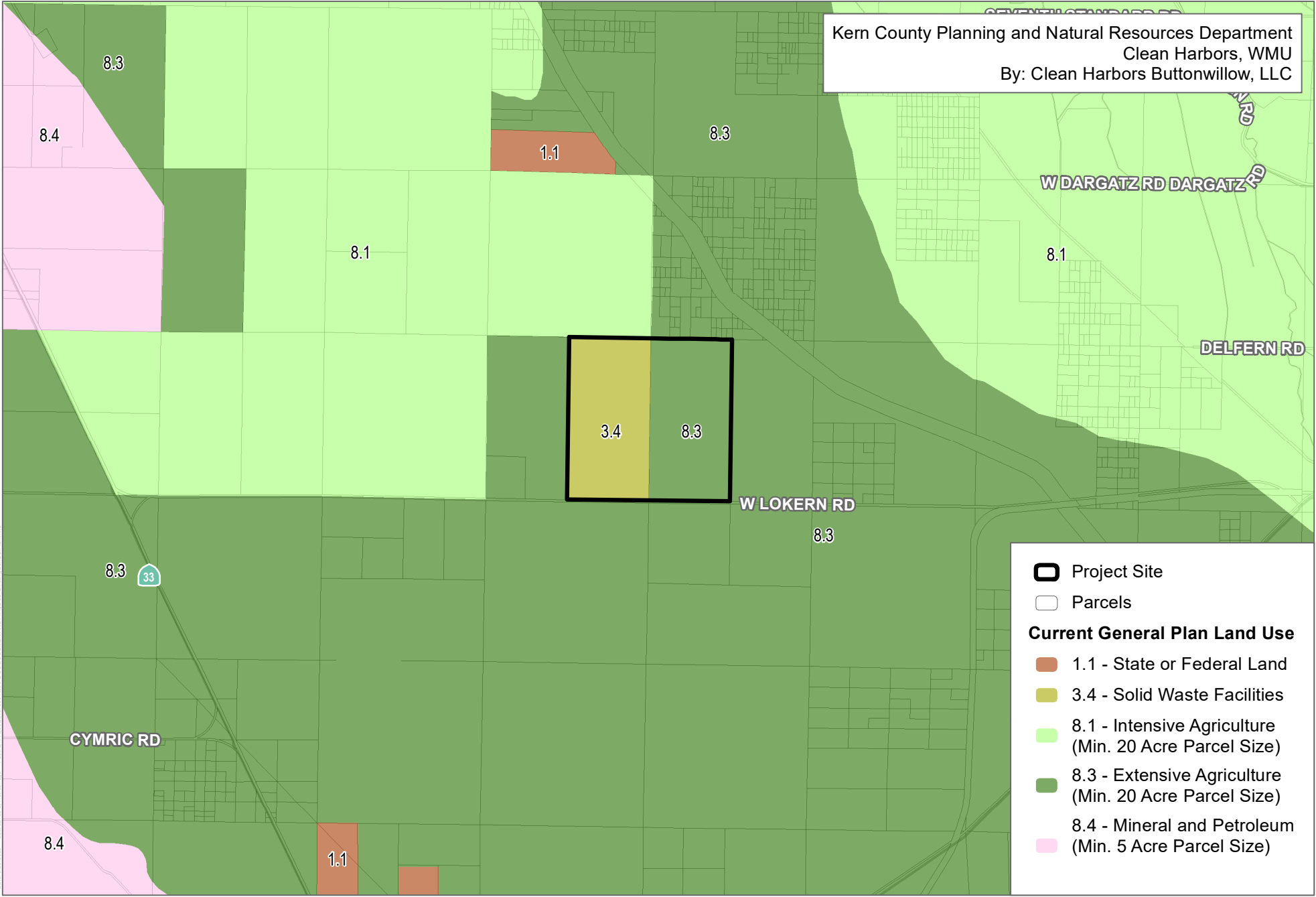
SOURCE: NAIP 2016, FEMA

2022



FIGURE 3-3
 FEMA Flood Zone Map
 Clean Harbors

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SOURCE: NAIP 2018, Kern County 2018

FIGURE 3-4
 Existing General Plan Designations
 Clean Harbors

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Kern County Zoning Ordinance

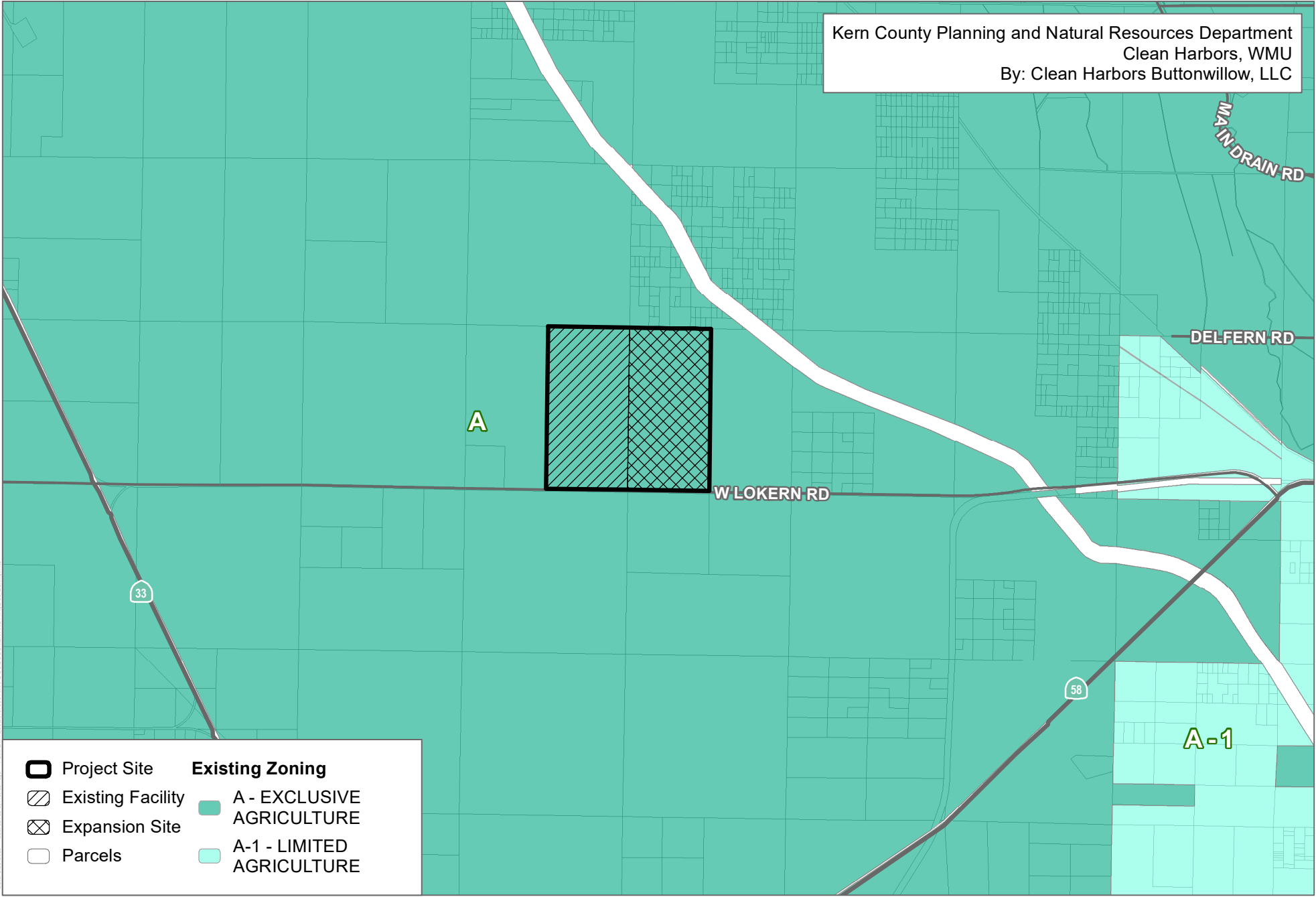
The project site and proposed uses are also subject to the provisions of the Kern County Zoning Ordinance. The Kern County Zoning Ordinance establishes the basic regulations under which land is developed. This includes allowable uses, building setback requirements, and development standards. Pursuant to state law, the Kern County Zoning Ordinance must be consistent with the Kern County General Plan and all specific plans. 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 land uses throughout the unincorporated area of the county. This zoning code applies to all property in unincorporated Kern County, except land owned by the United States or any of its agencies.

The project site is currently zoned A (Exclusive Agriculture) (see **Table 3-1: Project Site and Surrounding Land Uses** and **Figure 3-5, Existing Zoning Classification**). The purpose of the A zone 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. Solid Waste processing may operate within the Exclusive Agriculture Zone district if a CUP is obtained.

Kern County Airport Land Use Compatibility Plan

The project site is not within the sphere of influence (SOI) of any airport identified by the Kern County Airport Land Use Compatibility Plan (ALUCP). The closest public airport identified by the Kern County ALUCP is the Elk Hills-Buttonwillow Airport located approximately eight miles from the proposed project site.

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Project Site	Existing Zoning
Existing Facility	A - EXCLUSIVE AGRICULTURE
Expansion Site	A-1 - LIMITED AGRICULTURE
Parcels	

SOURCE: NAIP 2019, Kern County 2019

2020

DUDEK

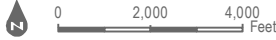


FIGURE 3 5
 Existing Zoning Classification

Clean Harbors

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3.5 Facility History

The existing Facility was developed by Petroleum Waste, Inc., a subsidiary of McKittrick Mud Company, on land owned by McKittrick Mud. The Kern County Board of Supervisors certified an EIR prepared for the Facility, issued a CUP, and approved the development of the Facility in 1982.

The Facility was granted Hazardous Waste Facility Permits by the California Department of Health Services, which was DTSC's predecessor, and the U.S. Environmental Protection Agency (EPA) in May 1983 and October 1984, respectively and again in 1996. These permits authorized the Facility to construct and operate a number of California hazardous waste and Resource Conservation and Recovery Act (RCRA) hazardous waste surface impoundments and landfills. Beginning in 1987, modifications were proposed to allow the conversion from a liquid hazardous waste disposal Facility to a solid (non-liquid) hazardous waste disposal Facility. A Supplemental Environmental Impact Report (SEIR) was prepared in 1989 with the Department of Health Services as lead agency under CEQA. The modifications were approved in 1990.

In 1989, the ownership of the Facility was transferred to GSX Services, which changed its name to Laidlaw Environmental Services (Lokern), Inc. (Laidlaw). In 1991, Laidlaw submitted a new RCRA Part B permit application to the DTSC and requested a modified Kern County CUP as well as modified Waste Discharge Requirements (WDRs) issued by the Central Valley Regional Water Quality Control Board (RWQCB). The application was for the construction of landfill WMU 35 in lieu of 8 smaller landfills (WMUs 101 through 108), closure of WMU 28 and 33, to remove the petroleum exclusion contained in the prior DTSC and RCRA permits (allowed for the acceptance of most hazardous waste), remove all references to the Modular Inorganic Treatment System (MITS) and Waste Stabilization Unit (WSU), and inclusion of a new groundwater monitoring program to comply with regulatory changes that occurred in 1991.

During the permit application review process, a SEIR¹ was prepared. In November 1994, the SEIR was certified by the Kern County Board of Supervisors and a modified CUP was issued. In April 1996, DTSC issued an updated/renewed Hazardous Waste Facility Permit.

Following the issuance of a modified CUP, the WDRs for the Class I and Class II WMUs at the Facility were amended and adopted by RWQCB Order No. 96-094 in May 1996 to incorporate changes in the Facility design/operations, to include proposed acceptance of new waste types, to modify the existing monitoring program, and to address closure. In 1998, Special Order 98-165 amended Order 96-094 to reclassify the former Class II surface impoundments (WMUs 18, 21, 22, 23, and 27) as Class II solid waste landfills and to regulate closure of these landfills.

In 1996, the Facility submitted a modification design plan for the proposed closure of WMUs 18, 21, 22, 23, and 27. In November of 2011, the RWQCB adopted Order No. R5-2012-0111 amending Order No. 98-165 for closure of Class II WMUs 18, 21, 22, 23, and 27. WMUs 18, 21, 22, and 23 have been closed in accordance with the requirements of these WDRs. WMU opening and closure years, as applicable, are shown in Table 3-2 below.

¹ Laidlaw Environmental Services (Lokern), Inc., Lokern Facility Modifications, Draft Supplemental Environmental Impact Report, State Clearinghouse No. 92042028, prepared by Ogden Environmental and Energy Services Co, Inc. dated January 1994.

TABLE 3-2: FACILITY WASTE MANAGEMENT TYPES AND STATUSES

Feature	CEQA Document	Hazardous / Non-Hazardous	Year Opened	Year Closed
WMU R-1	1982 EIR	Hazardous	1985	1995
WMU R-2	1982 EIR	Hazardous	1985	1995
WMU R-3	1982 EIR	Hazardous	1985	1995
WMU R-4	1982 EIR	Hazardous	1985	1995
WMU 1	1982 EIR	Hazardous	1985	1995
WMU 2	1982 EIR	Hazardous	1985	1995
WMU 3	1982 EIR	Hazardous	1985	1995
WMU 4	1982 EIR	Hazardous	1985	1995
WMU 5	1982 EIR	Hazardous	1985	1995
WMU 6	1982 EIR	Hazardous	1985	1995
WMU 7	1982 EIR	Hazardous	1985	1995
WMU 8	1982 EIR	Hazardous	1985	1995
WMU 9	1982 EIR	Hazardous	1985	1995
WMU 10	1982 EIR	Hazardous	1985	1995
WMU 11	1982 EIR	Hazardous	1985	1995
WMU 12	1982 EIR	Hazardous	1985	1995
WMU 13	1982 EIR	Hazardous	1985	1995
WMU 14	1982 EIR	Hazardous	1985	1995
WMU 15	1982 EIR	Hazardous	1985	1995
WMU 16	1982 EIR	Hazardous	1985	1995
WMU 17	1982 EIR	Hazardous	1985	1995
WMU 18	1982 EIR	Non-Hazardous	1985	2015
WMU 19	1982 EIR	Hazardous	1985	1995
WMU 20	1982 EIR	Hazardous	1985	1995
WMU 21	1982 EIR	Non-Hazardous	1985	2014
WMU 22	1982 EIR	Non-Hazardous	1986	2016
WMU 23	1982 EIR	Non-Hazardous	1986	2017
WMU 24	1982 EIR	Hazardous	1985	1995
WMU 25	1982 EIR	Hazardous	1985	1995
WMU 26	1982 EIR	Non-Hazardous	1985	1991
WMU 27	1982 EIR	Non-Hazardous	1986	2021
WMU 28	1989 SEIR	Hazardous	1987	2001

TABLE 3-2: FACILITY WASTE MANAGEMENT TYPES AND STATUSES

Feature	CEQA Document	Hazardous / Non-Hazardous	Year Opened	Year Closed
WMU 31	1982 EIR	Non-Hazardous	1988	N/A
WMU 33	1989 SEIR	Hazardous	1990	2001
WMU 34	1989 SEIR	Hazardous	1995	N/A
WMU 35 ¹	1994 SEIR	Hazardous	2002	N/A
STU ²	1989 SEIR	Hazardous	1992	N/A
DHSA ³	1989 SIR	Hazardous	1992	N/A
CSA ⁴	1994 SEIR	Hazardous	Not Built	N/A

¹ Cells 1, 2, 3 and 4 have been closed.

² Stabilization Treatment Unit

³ Drum Handling Storage Area

⁴ Container Storage Area

Laidlaw was acquired by Safety Kleen in 1998/1999 in a controlling interest of stock. In 2002, Clean Harbors acquired the Facility. Minor modifications to the CUP were approved by the Kern County Board of Supervisors in 2004, 2010 and 2014.

The 1996 DTSC Hazardous Waste Facility Permit expired on April 6, 2006. A permit renewal application was timely submitted in October 2005 as required by 22 CCR §66270.10(h). The application was deemed complete by DTSC on December 27, 2005, thereby allowing the Facility to operate pending issuance of the renewed permit. DTSC is currently performing a technical review of the permit application. The proposed project objectives include a decision on the DTSC permit. The Facility continues to operate in accordance with its existing Hazardous Waste Facility Permits until such time DTSC issues or denies a renewed permit (22 CCR §66270.51(a)).

3.6 Existing Facility Features and Operations

Permitted Waste

The Facility is permitted, by CUP No. 4, Map 97, to accept, treat, store, transfer, and dispose both non-hazardous and hazardous wastes that meet applicable land disposal restrictions. The Facility accepts non-hazardous, RCRA, and non-RCRA hazardous, solid, liquid, and sludge wastes in both bulk and containers. In addition, the Facility treats (e.g., stabilizes and solidifies) liquid, semisolid (e.g., sludges), and solid non-hazardous (when required by applicable regulations) as well as restricted hazardous waste for final disposal. The Facility is also authorized to accept Naturally Occurring Radioactive Material (NORM) and Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) wastes. Waste streams are separated into assigned landfill units depending on the nature of the waste. The Buttonwillow Facility serves a wide variety of industrial customers throughout California.

The Facility provides treatment, storage, transfer, and disposal services for a variety of hazardous and nonhazardous wastes. Currently permitted hazardous wastes are noted below in **Table 3-3: Hazardous**

Wastes Accepted. Current permits allow the Facility to accept hazardous and non-hazardous wastes associated with various industries for storage and treatment prior to placement in on-site landfills.

TABLE 3-3: HAZARDOUS WASTES ACCEPTED

- Petroleum-based wastes
- Halogenated solvents
- Nonhalogenated solvents
- Pesticides
- Halogenated organic sludge and solids
- Dye and paint sludge and resins
- Metal-containing liquids
- Metal-containing sludge
- Cyanide and metal liquids
- Non-metallic inorganic liquids
- Non-metallic inorganic sludge

Currently permitted non-hazardous, non-Municipal Solid Waste (MSW) Class II designated waste streams are noted below in **Table 3-4: Non-Hazardous Solid Wastes Accepted.**

TABLE 3-4: NON-HAZARDOUS SOLID WASTES ACCEPTED

- Non-putrescible Waste
- Solid Wastes
- Semi-Solid Wastes Including Ashes
- Industrial Wastes
- Demolition Wastes
- Construction Wastes
- Wastes from Fire and Natural Disaster Cleanup

The Facility currently does not accept class A explosives, compressed gases, biological agents, polychlorinated biphenyls (PCBs) greater than 50 parts per million, infectious wastes, municipal garbage or refuse, or radioactive materials that exceed 2,000 picocuries per gram or are defined as Nuclear Regulatory Commission regulated source materials.

Permitted landfill capacity is 13.25 million cubic yards with approximately 5.5 million cubic yards previously utilized, approximately 1.0 million cubic yards currently available and 6.75 million cubic yards permitted for future construction. The Facility is presently authorized by the current CUP to receive deliveries of up to 4,050 tons of hazardous and/or non-hazardous waste per day. The mix of waste type, hazardous versus non-hazardous, varies daily, as do the number of trucks. The maximum daily amount is only limited by tonnage and not by the number of truck loads or by the type of waste (hazardous or non-hazardous).

Facility Features

The locations of existing Facility features are shown in **Figure 3-6, Existing On-Site Traffic Patterns**, and include the following:

- Operational hazardous waste landfills WMUs 34 and 35;
- Closed hazardous waste landfills WMUs 28 and 33;
- Closed non-hazardous waste landfills WMUs 18, 21, 22, 23, and 27;
- Operational non-hazardous surface impoundment WMU 31;

- Stabilization Treatment Unit (STU), treats hazardous waste to meet State and Federal Land Disposal Restrictions (LDR) standards via stabilization/solidification process using pozzolanic reagents (e.g. fly ash, kiln dust, cement, etc.);
- Drum Handling Storage Area (DHSA), an existing curbed concrete storage area with a roof. This area is for the storage and handling of drums and containers and is permitted to store and/or transfer up to 1,670 drums of hazardous and/or nonhazardous wastes; and

Support facilities include administration office buildings, a laboratory building, a security building, truck scales, truck washout, employee and visitor parking, and maintenance and equipment storage buildings (see **Figure 3-2, Project Site Boundary Map**).

Waste Handling

Truck routes to the project site are shown in **Figure 3-7, Existing Truck Haul Routes**, below. Truckloads of incoming waste are temporarily staged for waste verification on the south side of the Facility. The Facility follows procedures for on-site routing of waste-hauling trucks to allow for orderly and safe waste routing procedures. In general, these procedures include:

- Truck drivers log-in at the main gate or truck receiving/scales area. Immediately after this log-in, drivers are required to stop and submit a shipping document (e.g., hazardous or non-hazardous manifest, bill-of-lading, etc.) to truck receiving. A waste sample may be taken from the load as required by the waste analysis plan to verify that the load satisfies the acceptance requirements.
- After approval of the waste, the trucks are directed to the Stabilization Treatment Unit, hazardous WMU 35, non-hazardous surface impoundment WMU 31, or the non-hazardous disposal units located at the Facility according to type and classification of waste (see **Figure 3-7, Existing On-Site Traffic Patterns**), below.
- Once a truck arrives at the STU or the appropriate landfill, the driver is then allowed to unload the waste.

Waste handling options available at the Facility include the following for both hazardous and nonhazardous activities:

- **Direct Transfer Offsite** - Consists of receipt of waste and subsequent direct shipment of waste to an off-site Treatment, Storage, or Disposal, Facility (TSDF) without on-site treatment, storage, or disposal. Transfer takes place within 15 days of receipt of the waste at the Facility.
- **Storage** - Consists of receipt of waste in containers (drums only) and placement in the on-site DHSA adjacent to the STU.
- **Unpackaging, Repackaging, and Off-Site Transfer** - Consists of opening containers and removing the contents in the DHSA. The contents are then repackaged into different containers for transfer to an off-site Facility.
- **Unpackaging and Consolidation** - Consists of opening the containers and removing the contents. Solid or semi-solid wastes may be placed into dump trucks, roll-offs or other suitable transportable units. These wastes may be moved to the on-site stabilization and treatment process or to an off-site TSDF. Solids that pass the paint filter test and meet all applicable treatment standards may go directly to the on-site landfill.
- **Stabilization and Treatment** - Bulk and containers loads received at the Facility may go directly to the STU. Containers and Packaged Laboratory Chemicals (PLCs) that have been unpackaged and consolidated into bulk loads may go to the STU.

- **Bin Top Solidification** - Bulk solid loads destined for direct landfill disposal, which have free liquids due primarily to settlement during transport and/or adverse weather conditions, are solidified prior to being sent to the landfill.
- **Landfill Disposal** - Only waste solids passing the paint filter test and the Land Disposal Restriction (LDR) Verification tests are disposed of in the landfill. Bulk solid loads, unpackaged and consolidated PLCs and container wastes that are solid may go directly to the landfill. Additionally, wastes that have been treated in the stabilization and treatment process and passed the LDR Verification tests may go to the landfill. WMU 35 is filled in cells. When operating cells are nearing capacity, new cells are constructed adjacent to the closing cells. Cells 1, 2, and 34 of WMU 35 are closed. Cells 5 and 5 are currently open and Cell 7 is under construction. Cells 8 and 9 will be constructed in the future as needed.

Future Permitted Features

As addressed by previous approvals, the following are permitted and planned future features:

- **Container Storage Area** – A Container Storage Area (CSA), a curbed concrete storage area, was permitted by DTSC in 1996. It is not yet constructed but is now planned for final design and construction. When constructed, it will be located on the west side of the Facility site, just west of the closed WMU 33. It will provide a temporary holding area for waste in roll-off bins. Wastes stored in this area will be awaiting stabilization or will have undergone on-site stabilization and treatment but, based on testing, will not yet have met requirements for landfill disposal. Alternatively, these wastes may be transported in bulk to an off-site treatment, storage, disposal, and recycling Facility.
- **Future On-Site Access/Traffic Routes** – As development of Cells 7 through 9 within WMU 35 progresses southward, the Facility entrance will be relocated to the southwestern end of the Facility.
- **Relocated Support Buildings and Infrastructure** - As development of Cells 7 through 9 within WMU 35 progresses southward, some of the Facility support buildings and infrastructure will be relocated to the southwestern portion Facility. These will include the administration office buildings, laboratory building, security building, truck scales, and employee and visitor parking. See Figure 3-8.

Water Use

Water for drinking, sanitary showers, laboratory use, and domestic use at the Facility is provided by the Facility water supply system. This system currently consists of a 10,000-gallon tank located east of the laboratory. Potable water is brought to the Facility from Buttonwillow Truck Stop and placed in the tank. Bottled water is supplied to the Facility for drinking. An on-site water well is used to draw water from the lower water table zone for non-potable water use such as on-site dust control, construction, truck washout needs and for fire-related emergencies. The groundwater is also stored in a centrally located pond for dust suppression and fire water storage. No waste handling activities occur within 250 feet of this well. The Facility uses approximately 64 acre-feet per year (afy) of water per year.

Dust Control

Non-potable water is obtained from an on-site well for dust control.

Vector Control

With the exception of small quantities of dead animals and vegetable waste, the Facility does not accept Municipal Solid Waste (MSW) or other putrescible wastes that provide a food source for vectors. Facility personnel may use the services of a pest control company if problems with vectors are identified during daily inspections.

Noise Control

The closest residence is located approximately 2.5 miles from the Facility. No complaints have been received to date by the existing Facility. The operator complies with local, State, and Federal requirements and regulations regarding noise control.

Security and Surveillance

As described in Section 3.5.2, the Facility is served by the KCSO.

Physical barriers and gates have been installed to control entry to the Facility. The perimeter of the 320 -acre Facility is surrounded by a 6 ft high chain link fence, with gates as the only means of entrance and exit. Entry into the Facility is through the Main gate located on the north side of Lokern Road. Facility personnel, vendors, contractors, waste haulers, and visitors are logged in and out of the Facility during normal business hours. Visitors and non-Clean Harbors employees are allowed entry only with approval from Clean Harbors' personnel at the Facility. Visitors are issued a visitor badge that is scanned to log in and out of the Facility. The other perimeter gates are kept locked and are used only in emergencies or for temporary access to and from the Facility by Clean Harbors' personnel or personnel approved by Clean Harbors.

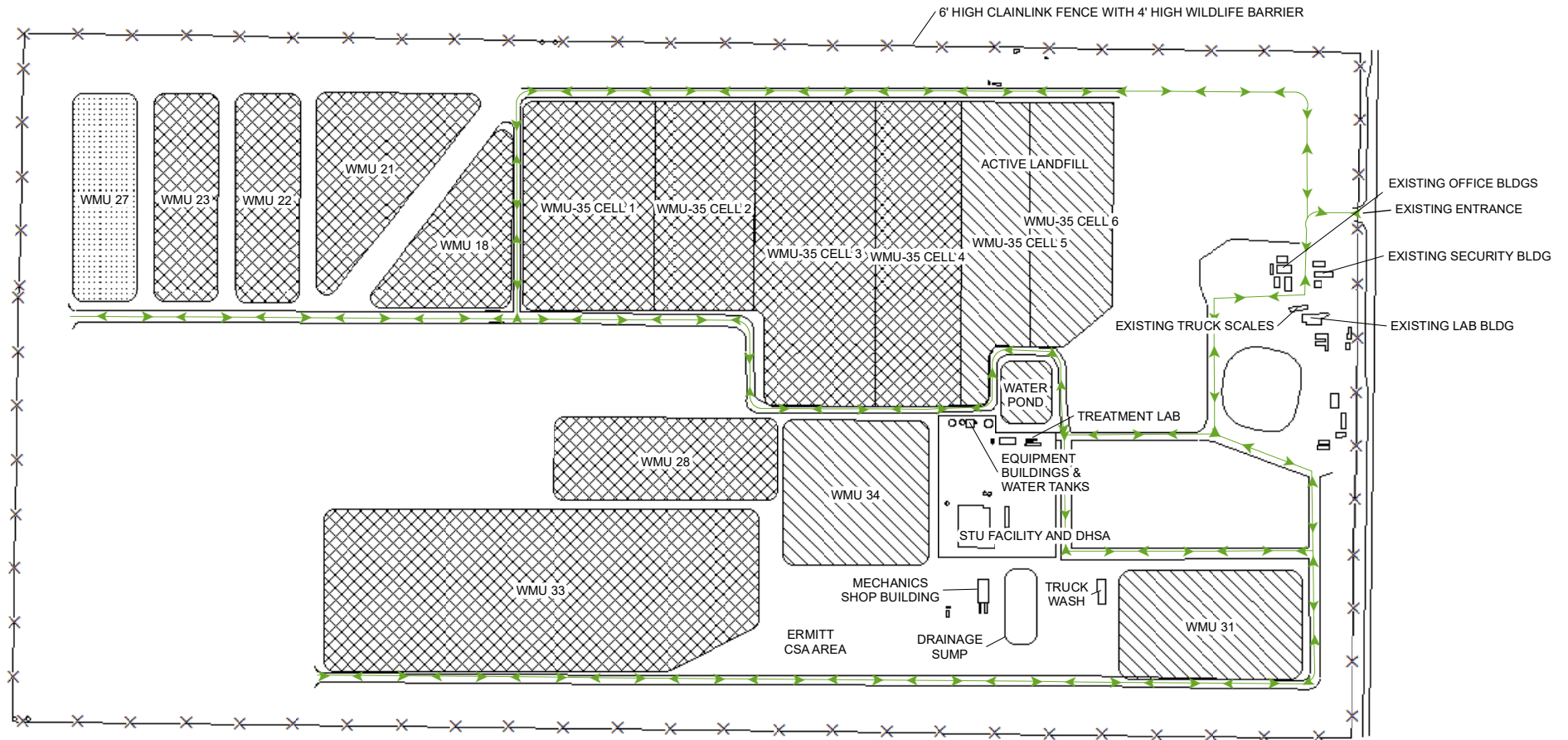
Other security equipment includes normal and emergency lighting, two-way radios, cell phones and the internal phone system. The truck receiving area and main access gate are lighted for nighttime operations. In addition, the truck-receiving operators working in the truck receiving area are equipped with two-way radios to immediately report potential problems.

The security equipment and procedures developed for the Facility are designed to minimize the potential for unauthorized entry, including people and livestock, to the active areas of the Facility and include security programs, barriers to control entry, and warning signs. The Facility is secured along the Facility boundary by fencing. A security guard is present at the Facility entrance during normal business hours.




Warning signs are posted at the active and inactive entrances to the Facility and on the perimeter fence. The signs are written in English and Spanish. The signs are visible from every approach to the Facility and are legible at a distance of 25 ft.

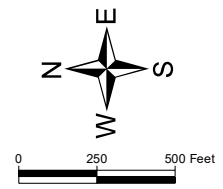
Light poles are strategically placed around the existing landfill facilities to provide illumination after daylight hours. Temporary portable lighting is also available on-site for night-time operations, as needed.

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LEGEND

-  OPERATING WASTE MANAGEMENT UNIT/CELL
-  CLOSED WASTE MANAGEMENT UNIT/CELL
-  NONHAZARDOUS WASTE MANAGEMENT UNITS BEING CLOSED
- STU STABILIZATION/TREATMENT UNIT



SOURCE: Ramboll 2019

2020

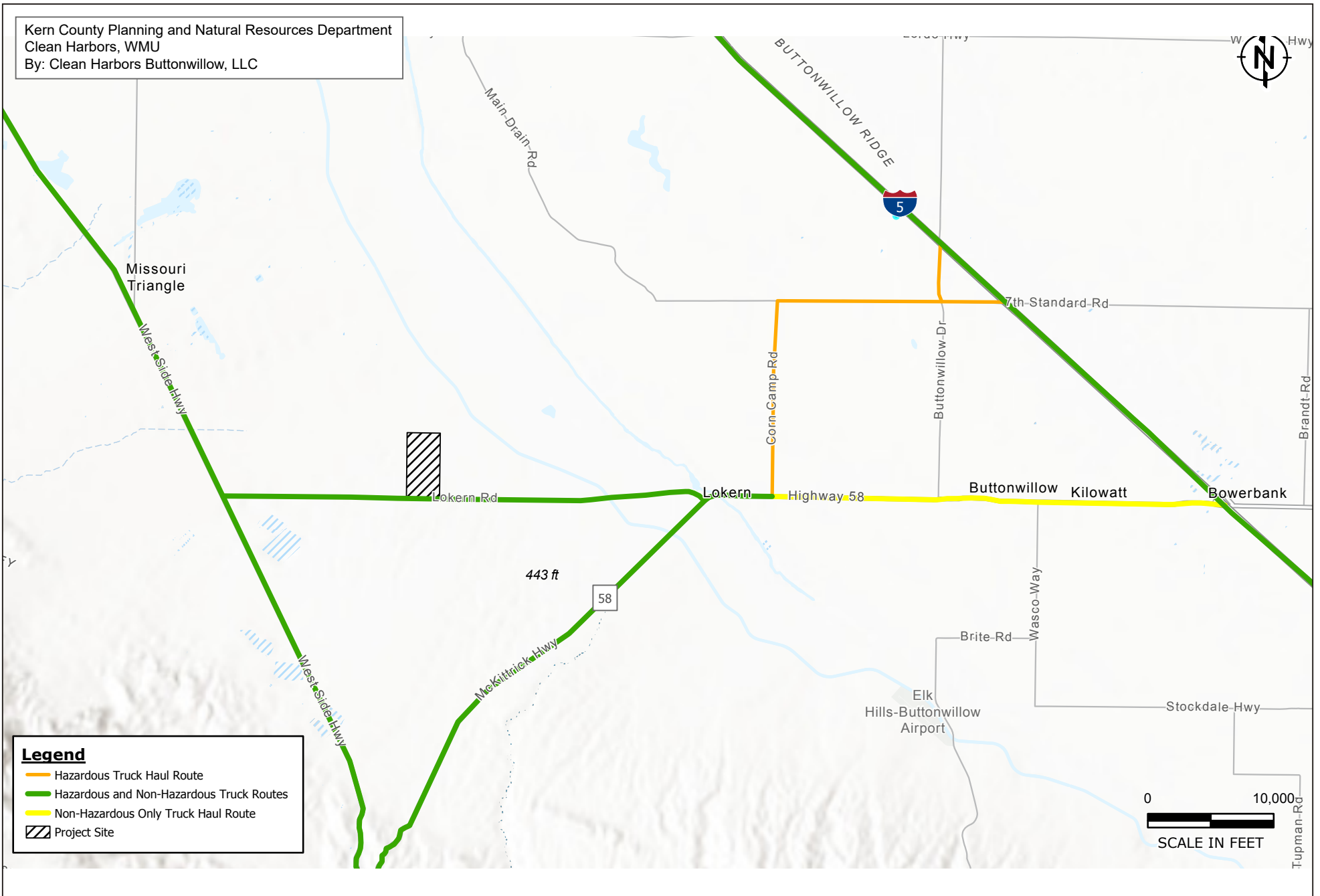
DUDEK

FIGURE 3-6

Existing On-Site Traffic Patterns

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Kern County Planning and Natural Resources Department
 Clean Harbors, WMU
 By: Clean Harbors Buttonwillow, LLC



SOURCE: Ramboll 2019
 2020

DUDEK

FIGURE 3-7
 Existing Truck Haul Routes

Clean Harbors

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Fire Control

Any fire that occurs at the Facility would be extinguished by on-site Facility personnel, as detailed in the existing Facility Emergency Response Plan (ERP), or contingency plan. See below for more details. Fire safety equipment at the Facility includes a fire pump shed and a water truck. Fire extinguishers are available in each Clean Harbors vehicle used at the Facility. KCFD is contacted if a fire occurs that cannot be controlled by on-site personnel and equipment. In general, the working area is well separated from adjacent undeveloped and agricultural areas by at least a 30 ft wide clear zone, which includes the perimeter roads, which have relatively sparse to no vegetation. Site equipment assigned to or entering the landfill is equipped with approved spark arrestors. Burning of waste is prohibited.

As described in Section 3.5.2, KCFD would provide back-up fire protection and emergency medical and rescue services for the Facility.

Emergency Response Plan / Contingency Plan

An ERP has established procedures to be followed at the Facility in the event of an emergency. The Facility's ERP has been designed to minimize hazards to human health and the environment from vandalism, fires, explosions, earthquakes, surface drainage problems, or any unplanned release of waste. The ERP response and procedural activities apply to both hazardous and non-hazardous waste operations, but the reporting and notification requirements would be specific to hazardous or non-hazardous waste authorized agencies. A list of the emergency contacts in an emergency situation that threatens human health and/or the environment is maintained at the Facility office and security office.

The Facility is designed, constructed, maintained, and operated to minimize the potential for fires, explosions, or any unplanned sudden or non-sudden releases of hazardous waste or waste constituents that may affect human health and/or the environment. An extensive personnel training program, stringent inspection program and comprehensive contingency plan are in place in order to minimize hazards in the future.

Sanitary Facilities

Sanitary facilities are provided at the Facility for Facility employees in accordance with 27 CCR, Section 21600(b)(5)(C). Sanitary facilities, including showers, are located near the main administrative building. Additional portable toilets are provided around the site, as needed, to accommodate construction and other activities on-site. Bottled water is supplied for consumption.

Operating Schedule

The Facility accept waste 253 days per year (5 days per week, 52 weeks a year assuming 7 holidays). The Facility's normal hours of operation are 9:00 AM to 5:00 PM, Monday through Friday, closed Saturday and Sunday; however, special arrangements can be made for off-hour acceptance.

Staffing

The Facility is staffed by approximately 25 employees for site operations, maintenance, environmental controls, records, emergency, and health and safety.

3.7 Project Characteristics

3.7.1 Proposed Project

The proposed project includes a request for land use entitlements to facilitate the continued and expanded permitted non-hazardous solid waste disposal and modifications to current operations and renewal of the existing hazardous waste disposal permit. The proposed project includes land use authorizations from Kern County for the:

- construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for non-hazardous waste from 13,250,000 cubic yards to 16,674,000 cubic yards and permitted non-hazardous waste disposal area from 160 acres to 193.3 acres, all within the existing Facility boundary;
- increase of permitted incoming daily maximum waste tonnage limit from 4,050 tpd to 8,100 tpd to allow for an additional 4,050 tpd of non-hazardous waste;
- expansion of the existing Facility area from 320 acres to 640 acres to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil stockpile storage area;
- construction and operation of four (4) new hazardous waste TTBs to replace the existing STU in support of the proposed modifications in the Application for a Hazardous Waste Facility Permit as required by DTSC; and
- construction and operation of a latex paint recycling building.

A decision will be made by DTSC, as Responsible Agency, to take action within its approving authority on the Hazardous Waste Facility Permit renewal application. This decision may include potential differences to the current Hazardous Waste Facility Permit (included as Appendix M), including, but not be limited to, the draft conditions included in Appendix N. A summary of the conditions within a potential draft Hazardous Waste Facility Permit includes the following:

- Clarification that disposal unit WMU 34 is not authorized for the use of temporary storage, staging, treatment, or curing of hazardous wastes;
- Post-closure monitoring activities are required for cells that have undergone closure;
- Clarification of the tank and equipment inspection process of the STU and TTBs to ensure continued safe operation;
- Authorization to construct the TTBs;
- Establishment of an end of life for the STU operations;
- Required notice and reporting of construction activities on the CSA, TTBs and DSBs;
- Required Land Disposal Restriction Verification Process for proposed TTBs separate than treatment data developed for the existing STU;
- Clarification to the loading and unloading requirements for operations at the CSA, DHSA, and DSB;
- Required details and location of the Groundwater Monitoring Program, Ambient Air Monitoring Program, Soil Monitoring Program, and Soil Gas Monitoring Program; and

- Provision for evaluation for modification, or revocation and reissuance of the revised Hazardous Waste Permit 5 years from the date of issuance.

Further discussion on the DTSC Regulatory Process and proposed changes can be found in Section 4.9 Hazards and Hazardous Materials.

The components of each portion of the proposed project are discussed in detail below.

3.7.2 Construction

Construction Implementation

During construction, a temporary construction staging area, parking area, and construction office trailer will be located within the existing Facility area. Additional dusk-to-dawn security lighting may be required for these areas. Construction activities would generally occur during daytime hours between 6:00 a.m. and 9:00 p.m.. No overnight construction is expected to occur.

New Class II Non-Hazardous Waste Landfill Units

Development of the new Class II non-hazardous landfills will include approximately 33.3 acres of landfill waste footprint, environmental monitoring systems, stormwater conveyance systems, and stockpiling of dirt in the undeveloped expansion area east of the Facility. The gross capacity of WMUs 36, 37, and 38 will be 1,348,000, 1,219,000 and 857,000 cubic yards (CY), respectively, for a total additional increase of 3,424,000 CY. The footprints for WMUs 36, 37, and 38 will be 12.6, 12.3, and 8.4 acres, respectively.

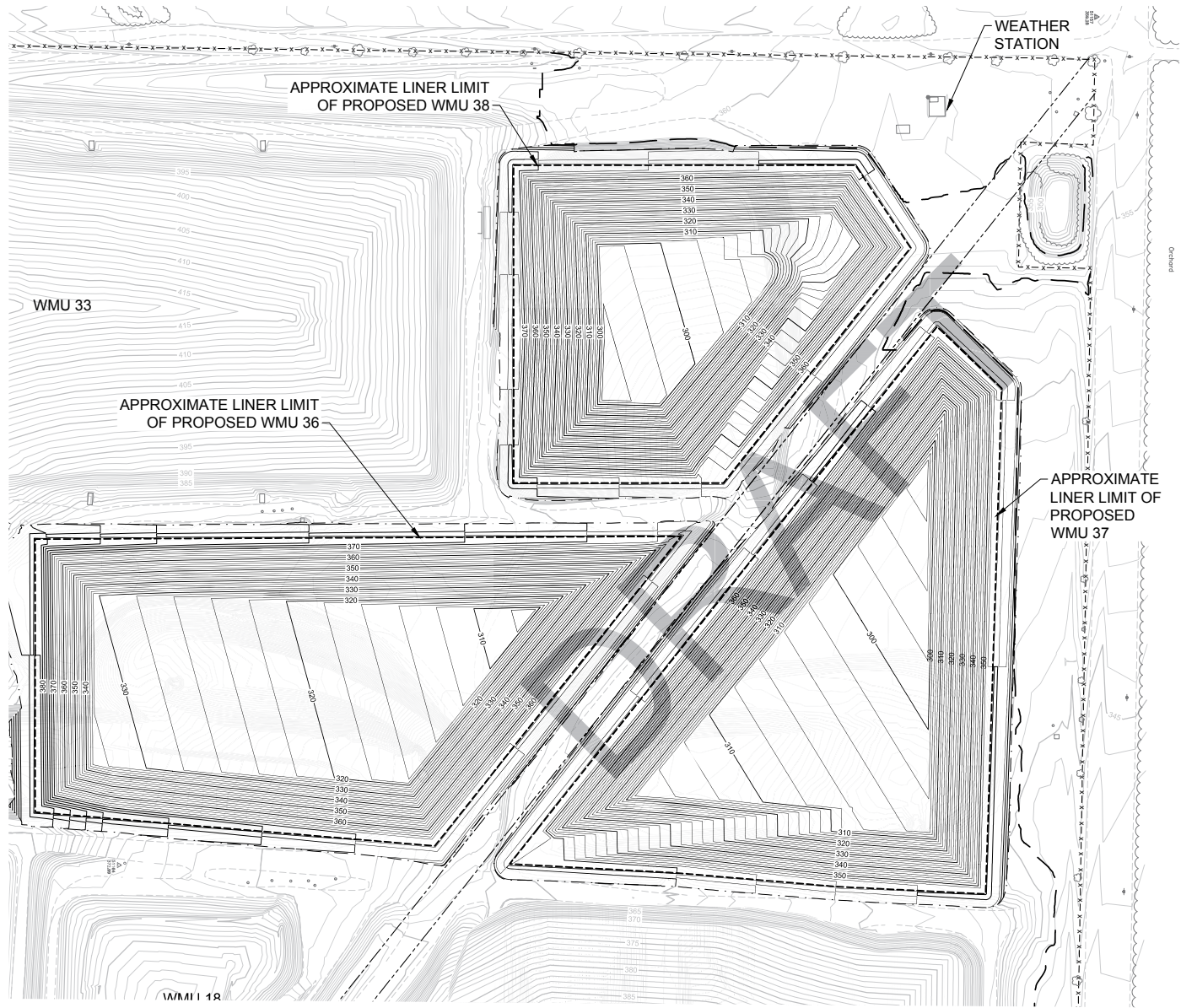
The liner, the leachate collection and removal system (LCRS), and closure design for the new Class II non-hazardous waste landfills has been prepared to meet or exceed state and federal regulatory requirements while providing protection of the environment and service to Kern County and the State, see **Figure 3-8, WMUs 36, 37, 38 Liner Plan**, below.

The new Class II non-hazardous waste landfills have been designed to meet the physical and climatological settings of the landfills including:

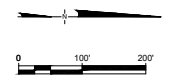
- Meeting the minimum 5-ft separation between waste placement and the highest anticipated elevation of underlying groundwater as required by 27 CCR, 20240(c).
- Locating the new Class II landfills in an arid environment.
- Lining the new Class II landfills with a composite liner system composed of a high density Polyethylene (HDPE) liner and a low-permeability layer (GCL) that meets the performance criteria of the state and federal regulations.
- Ultimately, capping the new Class II landfills with an evapo-transpirative (ET) final cover consisting of on-site soils to limit migration of liquids into the landfill.
- Designing on-site drainage structures to handle 1,000-year design storm flows.
- Waste slopes in the landfill will be constructed to approximately 3:1 (horizontal to vertical).

WMUs 36 will be constructed initially. WMU 37 will be constructed as WMU 36 nears capacity and closure. Construction of WMU 38 will follow as WMU 37 nears capacity and closure. Non-hazardous WMU 36 will be constructed in two stages and filled sequentially. WMUs 37 and 38 will each be constructed in one phase. Construction will include excavation, placement and compaction of engineered fill and prepared

subgrade, placement of drainage aggregate and operations layer material, installation of piping, lighting, and installation of temporary erosion control features. Construction of the first stage of WMU 36 is expected to begin within a year of receiving all the necessary permits and approvals for construction and take an estimated seven months. The construction workforce would consist of 8 to 35 workers over the seven months construction period. Future construction of the second stage of WMU 36, and the subsequent construction of WMUs 37 and 38 would require similar construction periods and workers.



LEGEND	
	EXISTING GROUND MAJOR CONTOUR (5')
	EXISTING GROUND MINOR CONTOUR (1')
	EXISTING SITE ACCESS ROAD
	FENCE
	100 YEAR FLOODPLAIN BOUNDARY, SEE NC
	APPROXIMATE CHEVRON PIPELINE EASEMENT
	APPROXIMATE WMU LINER LIMIT
	APPROXIMATE GRADING LIMITS



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A total of approximately 2.01 MCY of cut and approximately 61,000 CY of fill is required to develop the landfill units, with depth ranges between 63 feet to 80 feet.

Landfill Borrow Soil Storage

The soils excavated from the new non-hazardous landfills will be used for landfill construction and operations, cover soil, or stockpiled. Location of the proposed stockpile areas are within the proposed landfill expansion area as shown on **Figure 3-9, Future Facilities**. As part of the project design, the proposed stockpile areas were located to avoid the existing jurisdictional waters. The estimated volumes of the proposed stockpiles are shown below in **Table 3-5, Proposed Stockpile Capacities**. Stockpile areas will be developed sequentially starting with Stockpile 1, moving to the next stockpile area after a stockpile area reaches capacity. The soil storage would result in flat-topped stockpiles, approximately 40 to 50 feet tall. No additional lighting will be installed in the stockpile areas.

TABLE 3-5. PROPOSED STOCKPILE CAPACITIES

Stockpile No.	Estimated Stockpile Capacity
Stockpile 1	2,754,000 CY
Stockpile 2	455,000 CY
Stockpile 3	915,000 CY
Stockpile 4	639,000 CY

Hazardous Tank Treatment Building Design

Four proposed TTBs will be developed on the west side of the existing Facility site, see Figure 3-9. Each TTB includes one bulk sludge or solid waste unloading bay, which will include a truck ramp, overhead rollup door, and treatment tank. Each TTB will also include container storage space for receiving, storing, and transferring containerized wastes in drum type containers, and related waste processing and treated waste handling equipment.

The TTBs share a common, modular design, and generally differ only in building orientation, or in the respective location of dry reagent storage/handling area and drum storage/process area for each TTB, which may change by 180 degrees depending on the TTB. Each TTB has building dimensions of 72 feet by 62 feet for an area of 4,464 square feet per building. The TTBs are to be permitted as hazardous waste tank treatment systems.

The treatment tanks will be installed in recessed concrete vaults within the TTB process floor, with less than 90 percent of the treatment tank volume below ground level surrounding the TTBs, therefore these treatment tanks do not constitute underground storage tanks (USTs) under the alternate definition of UST at 23 CCR 2621. The treatment tanks are also exempt from the alternate classification as USTs under both California Health & Safety Code 25281(y)(1) and 23 CCR 2621(a)(14).

The TTBs have a split-level process floor: an upper (i.e., higher elevation) process floor for inbound waste receiving, reagent addition, and in-tank waste treatment; and a lower (elevation) process floor for waste loading onto truck-mounted roll-off bins, and waste off haul. The entire waste treatment process will be contained within each enclosed TTB and follow applicable regulations under 6 CCR 1007-3-264.

Each TTB treatment tank has 179 cubic yards of gross capacity. With administrative controls for overflow protection, each treatment tank has 151 cubic yards of net operating capacity (87 percent of its gross capacity). The combined treatment capacity of the four tanks in the four TTBs is 1,600 tons per day, for a total of 400,000 tons per year. Each TTB's drum storage area will include a handling and storage platform for drum storage, drum dumping and drum shredding. The drum storage area for each TTB has a storage capacity of 20,000 gallons totaling 80,000 gallons for the 4 units.

Primary containment for the TTBs is provided by the steel treatment tanks, which have integral secondary containment, and additional tertiary containment placed within a coated concrete vault, and by the containers in the drum storage area. The tanks and containers are designed to be non-leaking, and will be subject to periodic inspections to assure any inadvertent leakage is detected and fixed. The TTB concrete process floors will serve as secondary containment system to collect liquid waste spillage, fire suppression deluge water, equipment or building wash waters, emergency eye wash or emergency shower discharges, or other liquids. Each TTB process floor perimeter is surrounded by a continuous 7-inch high perimeter berm and is sloped to a sump. Additional containment is provided via a continuous concrete containment curb around the TTB building.

Construction of the four new TTBs is expected to begin within six months of receiving all the necessary permits and approvals for construction and estimated to take one year. The construction workforce would consist of 8 to 65 workers over the one-year construction period. Pending construction of the TTBs, restricted hazardous wastes will continue to be treated in the existing STU for one (1) year after permit issuance. The Facility would be permitted to operate the STU for one (1) year from DTSC issuance of the potential Hazardous Waste Facility permit, and up to one additional year if approved by DTSC based on the timely submission of construction permits for the proposed TTBs to allow for the transition of the treatment operations. Future closure of the STU is not part of the proposed project.

Paint Recycling Building

The Paint Recycling Building will consist of a pre-engineered steel building with loading dock(s) located near the center of the Facility. Construction of the Paint Recycling Building is expected to begin within six months of receipt of all necessary permits and approvals for construction and estimated to take 3 to 9 months. The construction workforce would consist of 6 to 10 workers.



Construction Water Use

During construction of the proposed project, water would be required for common construction-related (non-potable) purposes, including but not limited to: dust suppression, soil compaction, truck wheel washing, and grading. Water for these purposes would be supplied by an existing on-site water well used to draw water from the lower water table zone. Water for sanitary showers and domestic use at the Facility is provided by the Facility potable water supply system. This system currently consists of a 10,000-gallon tank located east of the laboratory. Potable water is brought to the Facility from Buttonwillow Truck Stop and placed in the tank. Bottled water would be supplied to the Facility for drinking.



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 Clean Harbors, WMU
 By: Clean Harbors Buttonwillow, LLC

- Legend**
- Future Facility
 - Site Boundary
 - Proposed Grading Contour (10')
 - Proposed Grading Limit


 0 500

 SCALE IN FEET

SOURCE: Ramboll 2019
 2020



FIGURE 3-9
 Future Facilities
 Clean Harbors

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3.7.3 Operations

This section contains a breakdown of planned operational changes on both the non-hazardous and hazardous sides of the Facility. See **Figure 3-9, Future Facilities**, for the layout of both proposed and existing facilities.

Non-Hazardous Waste Landfill Operation

The waste to be accepted in the new non-hazardous WMUs 36, 37, and 38 will be limited to solid, non-hazardous, non-Municipal Solid Waste Class II designated wastes noted in **Table 3-4 Non-Hazardous Solid Wastes Accepted**. The non-hazardous solid waste will consist of non-putrescible, solid, semi-solid wastes including ashes, industrial wastes, demolition and construction wastes, and wastes from fire and natural disaster cleanup as allowed by law.

As described in Section 3.6, the Facility is presently permitted to receive deliveries of up to 4,050 tons of hazardous and/or non-hazardous waste material per day. The mix of waste type, hazardous versus non-hazardous, varies daily, as do the number of trucks. This maximum daily amount is only limited by tonnage and not by number of truck loads or by type of waste (hazardous or non-hazardous). In addition to the original maximum of 4,050 tons of per day (tpd) of hazardous and/or non-hazardous waste, the proposed project involves accepting an additional 4,050 tpd of non-hazardous waste. The non-hazardous waste will be placed in the new non-hazardous WMUs 36, 37, and 38.

The estimated lifetime of WMUs 36, 37, and 38 is a combined 16 years. For the purpose of site life calculations it was assumed an average daily tonnage of 1,000 tpd and that waste will initially be accepted in WMU 36, Phase 1 in 2024. For calculation of site life with anticipated disposal rates, it was assumed a total disposal of 253,000 tons into WMU 36, Phase 1 for the 2024 calendar year. WMU 37 will be constructed as WMU 36 nears capacity and closure. Construction of WMU 38 will follow as WMU 37 nears capacity and closure.

The new non-hazardous landfills will be operated using the area fill method. Daily cells are constructed adjacent to the previous daily cells to complete the active lift on the deck of the landfill. Waste materials are unloaded at the base of the landfill and placed in lifts up to 2 feet in thickness. Waste materials are spread by a bulldozer or compactor in layers and subsequently compacted by a landfill compactor. A number of passes are made with the compactor, as needed, to compact the waste to achieve a firm and unyielding surface.

The soils excavated and stockpiled in the expansion area will be used for intermediate cover, if needed, and final cover for the new non-hazardous landfills. A 12-inch intermediate cover will be applied on areas where waste fill operations or additional cells are not to be constructed for periods greater than 180 days. The final cover will consist of 3 feet of soils.

Equipment required to operate the landfills is shown below in **Table 3-6, Landfill Operation Equipment**.

TABLE 3-6: LANDFILL OPERATION EQUIPMENT

Equipment	Use
Bulldozers	Motor Grader Spreading
Compactors	Compacting

TABLE 3-6: LANDFILL OPERATION EQUIPMENT

Equipment	Use
Backhoe	Excavator Excavating; assisting with unloading
Font-End Loader	Hauling and spreading
Scrapers	Hauling and spreading
Dump Trucks	Waste transfer; Support
Water Truck	Support
Fuel Trucks	Support
Mechanic Trucks	Support
Grease Trucks	Support

The Facility's CUP currently has no limit on truck trips per 24-hour period. However, the daily 4,050 tpd limit typically forces truck trips to top out at approximately 198 trucks per day. Truck trips for waste streams would increase under the proposed project, with the increased allowance for intake of non-hazardous waste.

Waste trucks typically carry between 12 and 23 tons of waste. Under existing conditions, on days when the maximum 4,050 tons of waste (hazardous and/or nonhazardous) are delivered to the Facility, this would result in between approximately 176 and 338 trucks per day traveling to and from the Facility. On average days with 1,000 tons of waste delivered, the number of trucks would be substantially fewer, between 43 and 83 trucks per day. On average the tonnage per month of hazardous waste is approximately 22,758 tons and non-hazardous waste is approximately 17,894 tons. Therefore existing Facility operations involve approximately 1,035 trucks per month containing hazardous waste and approximately 813 trucks per month containing non-hazardous waste delivered to the Facility. With the additional permitted daily non-hazardous waste tonnage, truck traffic for non-hazardous waste has the potential to increase once a new WMU is constructed and additional non-hazardous materials can be accepted. Therefore, on days when the maximum additional 4,050 tons of non-hazardous waste are delivered to the Facility, this would result in approximately 176 to 338 new trucks per day. On average days with 1,000 tons of waste delivered, the number of new trucks would be substantially fewer, between 43 and 88 trucks per day.

The Facility will continue to follow procedures for on-site routing of waste-hauling trucks as described in Section 3.6.

The new Class II non-hazardous landfills will require two full-time personnel for site operations, maintenance, environmental controls, records, emergency, and health and safety. As with current conditions, existing office staff and scale clerks will be shared between hazardous and non-hazardous materials operations.

Landfill Borrow Soil Storage

Soils excavated during construction of the WMUs will be stockpiled in the expansions area. These soils will be removed, as needed, to be used for intermediate cover, if needed, and final cover for the new non-hazardous landfills. The stockpiles will be maintained in accordance with an updated Storm Water Pollution Prevention Plan (SWPPP) per the requirements of the National Pollutant Discharge Elimination System (NPDES) General Construction Permit Program which includes Best Management Practices (BMPs) to

minimize the potential for erosion and loss of topsoil and could include soil stabilization, silt fencing, straw bale and temporary catch basins.

Paint Recycling Building Operation

PaintCare Inc., a non-profit 501(c)(3) organization, represents paint manufacturers (paint producers) to plan and operate paint stewardship programs in U.S. states and jurisdictions that pass paint stewardship laws. Clean Harbors will contract with PaintCare to provide a building for the collection and consolidation of leftover paint. The paint recycling building will be used for collecting and consolidating leftover paint as part of the PaintCare program. Paint, stains, and other acceptable program products are accepted if the lids are secured tightly, no containers are leaking, and they have original labels and in their original containers. No oil-based paints will be recycled. The products that are accepted will be packed into larger containers (boxes or drums). These containers will be sent to a PaintCare Facility for sorting by type to consolidate into larger containers to be reused and/or recycled.

Existing personnel will operate and maintain the new PaintCare recycling Facility and the TTBs as part of the on-going operations.

Hazardous Waste Tank Treatment Buildings Operation

California land disposal restriction regulations in 22 CCR 66268 require certain regulated hazardous wastes to undergo treatment prior to land disposal. Treatment in the TTBs is designed to achieve compliance with applicable LDRs, as defined by California hazardous waste management laws and regulations. A waste must be treated to meet the applicable land disposal regulations prior to being disposed in a landfill.

Waste will be treated in a double-walled steel tank installed within a concrete vault in the TTB process floor. Different treatment standards have been established for certain California regulated wastes. Using the appropriate treatment standard, wastes will be stabilized and solidified. The stabilization/solidification reaction take place when additives such as cement, kiln dust, ash, clay, lime or other pozzolans (silicate-based materials) are added to treat the waste and reduce the leachability of toxic metals and organic chemicals. The TTBs' liquid and sludge/solid treatment system uses reaction with pozzolanic, cementitious, and clay-based materials as the primary process for elimination of free liquids. The actual blend of additives used for specific wastes will depend on waste characteristics, additive availability, bench scale treatability results, and historical processing experience. The stabilization/solidification reaction may generate heat through the hydration process. Mixing of different wastes will be based on treatability testing to prevent uncontrolled reactions from occurring. Additional chemical reactions may be used to stabilize specific wastes, as determined by procedures in the Facility's Waste Analysis Plan. Following treatment, treated wastes will be transferred via excavator bucket to roll-off bins. Treated wastes needing LDR verification will be staged (in roll-off bins) at the CSA while the treated wastes cure, and are later tested prior to disposal.

Waste transported in drums from generators off-site or from other operations on-site will generally be stored in the DSB of a TTB, prior to solidification and/or other treatment in the treatment tank. The drums will then be sent through the drum shredding equipment which will convey shredded drums into the treatment tanks for solidification.

Ancillary Operations/Facility Operating Hours

The project does not involve any changes to hours and days of operation, as described in Section 3.6.

3.8 Land Use Classification Modifications

Implementation of the proposed changes to the Facility will require modifications to the existing land use classifications. An amendment to the Kern County General Plan is necessary to change the approximately 320-acre parcel (parcel # 099-251-32) from the existing 8.3 (Extensive Agriculture, 20 min acres) land use designation to a 3.4 (Solid Waste Disposal Facility) designation. The proposed change is shown on **Figure 3-10, Proposed General Plan Designations**.

In order to be consistent with the proposed general plan amendment, a zone change of 640 acres (parcels 099-290-17 and 099-251-32) from A (Exclusive Agriculture) to M-3 (Heavy Industrial) will also be considered. See **Figure 3-11, Proposed Zoning Classification**.

Associated changes include an amendment to the Kern County General Plan Appendix E Map, “Clean Harbors Buttonwillow, LLC w/2,000 ft Buffer” to show the current “Clean Harbors” name and revised permitted Facility boundary, with designated buffer property area; and removal of both parcels from Agricultural Preserve No. 2. Please refer to **Figure 3-12, Kern County General Plan and Clean Harbors Existing General Plan with Buffer**, and **Figure 3-13, Kern County General Plan and Clean Harbors Proposed General Plan with Buffer**.

The existing Facility site and expansion parcel would also be removed from Agricultural Preserve 2. Please refer to **Figure 3-14, Clean Harbors Existing Agricultural Preserve Map**, and **Figure 3-15, Clean Harbors Proposed Agricultural Preserve Map**.

3.9 Entitlements Required

The Kern County Planning and Natural Resources Department, as lead agency for the proposed project, has discretionary authority over the expansion of the non-hazardous waste Facility. DTSC, acting as a responsible agency, has discretionary authority over the renewal of the existing Hazardous Waste Facility Permit.

Construction and operation of the proposed project may require additional discretionary actions and approvals from state and local agencies, as further described below.

3.9.1 Federal Responsible Agency

None

3.9.2 State Responsible Agency Approvals

- Department of Toxic Substances Control (DTSC)
 - Hazardous Waste Facility Permit renewal application
 - While the Hazardous Waste Facility permit renewal application does **not** include an increase in the hazardous waste capacity, the scope of the proposed permit includes renewed authorization for existing facilities and operations, with the following modifications:
 - Classification of the current STU tanks as miscellaneous units;
 - Construction and operation of the four new TTBs where hazardous-waste treatment will be conducted within the existing Facility and reorganizing operations;

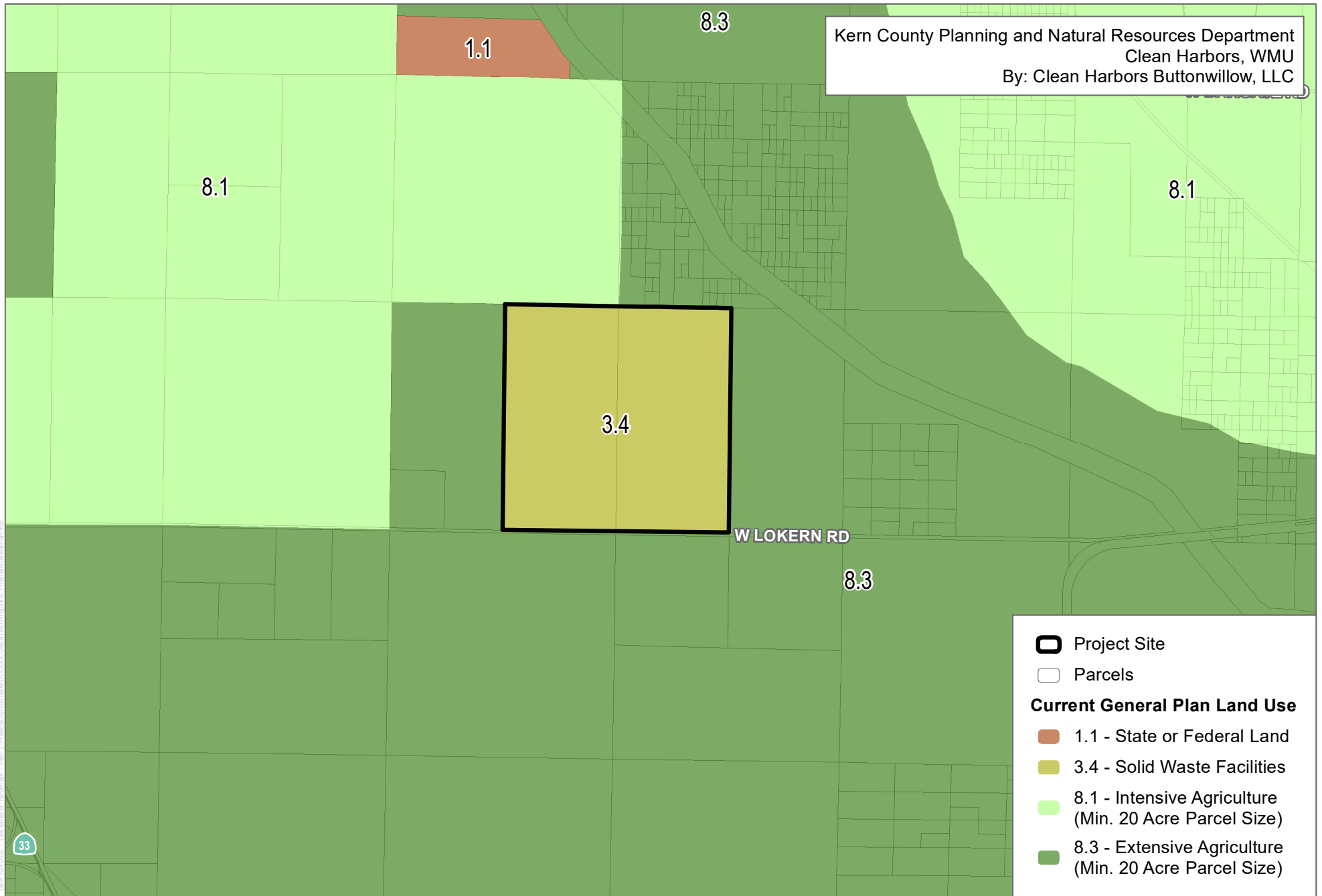
- Construction and operation of the four new DSBs to support the operation of the new TTBs; and
- Addition of environmental monitoring programs consistent with current regulatory standards.
- Regional Water Quality Control Board (RWQCB)
 - Waste Discharge Requirements
- California Department of Resources Recycling and Recovery (CalRecycle)
 - Odor Impact Minimization Plan
 - Solid Waste Facility Permit

3.9.3 Local Entitlements/Approvals

Kern County

- Consideration and certification of a final Environmental Impact Report (FEIR) with appropriate State CEQA Guidelines Sections 15091 Findings of Fact, 15093 Statement of Overriding Considerations (if necessary), and adoption of the Mitigation Measures Monitoring Program by the Kern County Planning Commission and Kern County Board of Supervisors
- Amendment to the Kern County General Plan of approximately 320-acres (on parcel 099-251-32) from the existing 8.3 (Extensive Agriculture, 20 min acres) land use designation to a 3.4 (Solid Waste Disposal Facility) designation;
- Amendment to the Kern County General Plan Appendix E Map, “Petroleum Waste Management” to show the current “Clean Harbors” name and revised permitted Facility boundary, with designated buffer property area;
- Zone change (Zone Change Case No. 2, Map 97) of 640 acres (parcels 099-290-17 and 099-251-32) from A (Exclusive Agriculture) to M-3 (Heavy Industrial);
- Application for removal of both parcels from Agricultural Preserve No. 2; and
- Modification of the existing CUP No.4, Map No. 97 to include:
 - an increase in the permitted Facility boundary from 320 acres to 640 acres to include the expansion parcel for a soil stockpile area;
 - an increase in permitted disposal area from 160 acres to 193.3 acres for the addition of non-hazardous waste landfill units (WMU 36, 37, 38) within existing Facility boundary;
 - an increase in permitted disposal capacity from 13,250,000 cubic yards to 16,674,000 for the addition of non-hazardous waste landfill units (WMUs 36, 37, 38) within existing Facility boundary;
 - construction of four new hazardous waste treatment buildings (tank treatment buildings) to support modifications proposed in a Hazardous Waste Facility Permit renewal application; and
 - construction of one latex paint recycling building.
- Kern County Public Works - Building and Development- Flood Plain & Survey
 - Plan for the Disposal of Drainage Waters
 - Grading and Building Plans
- Kern County Public Works – Operations & Maintenance - Regulatory Monitoring & Reporting

- Hazardous Materials Business Plan
- Septic and Water System Permits
- Spill Prevention Control and Countermeasure Plan
- Safety Management Procedures
- Kern County Public Works – Development Review
 - Access Road Design and Encroachment Permit
- Kern County Fire Department
 - Fire Safety Plan



SOURCE: NAIP 2018, Kern County 2018

2020

DUDEK



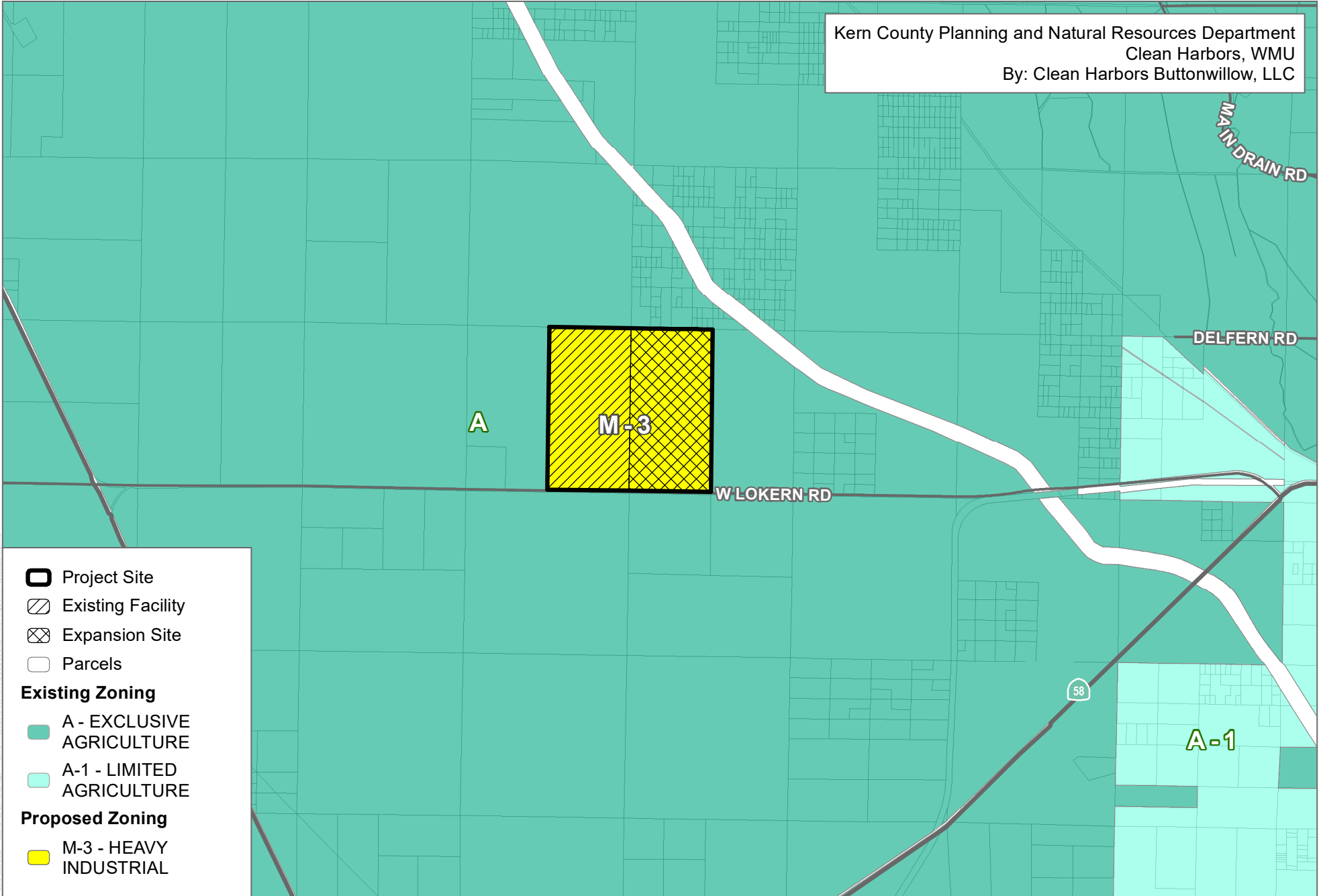
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FIGURE 3-10

Proposed General Plan Designations

Clean Harbors

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Legend

- Project Site
- Existing Facility
- Expansion Site
- Parcels

Existing Zoning

- A - EXCLUSIVE AGRICULTURE
- A-1 - LIMITED AGRICULTURE

Proposed Zoning

- M-3 - HEAVY INDUSTRIAL

SOURCE: NAIP 2019, Kern County 2019

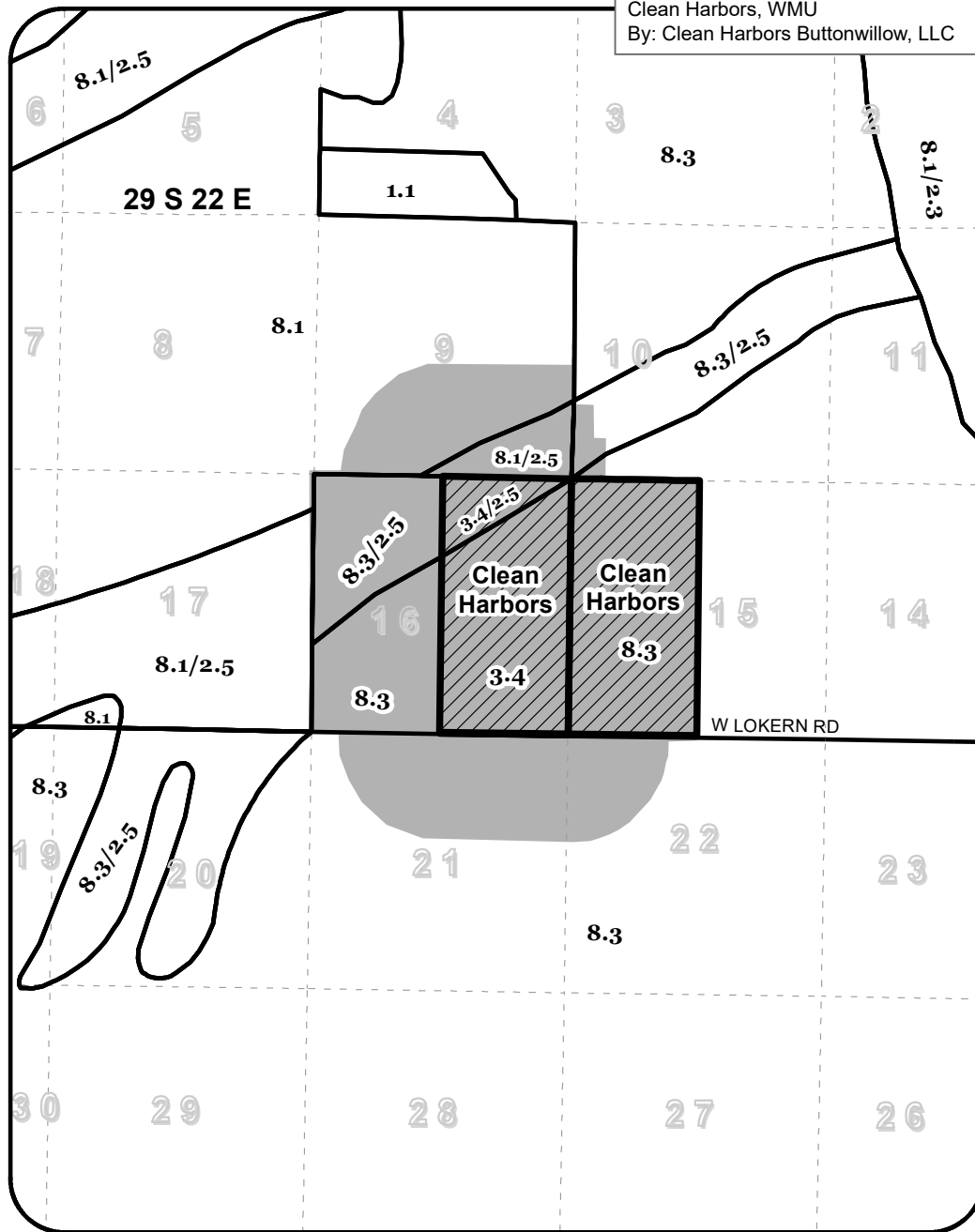
2020



FIGURE 3-11
 Proposed Zoning Classification

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Kern County Planning and Natural Resources Department
 Clean Harbors, WMU
 By: Clean Harbors Buttonwillow, LLC



CLEAN HARBORS BUTTONWILLOW, LLC

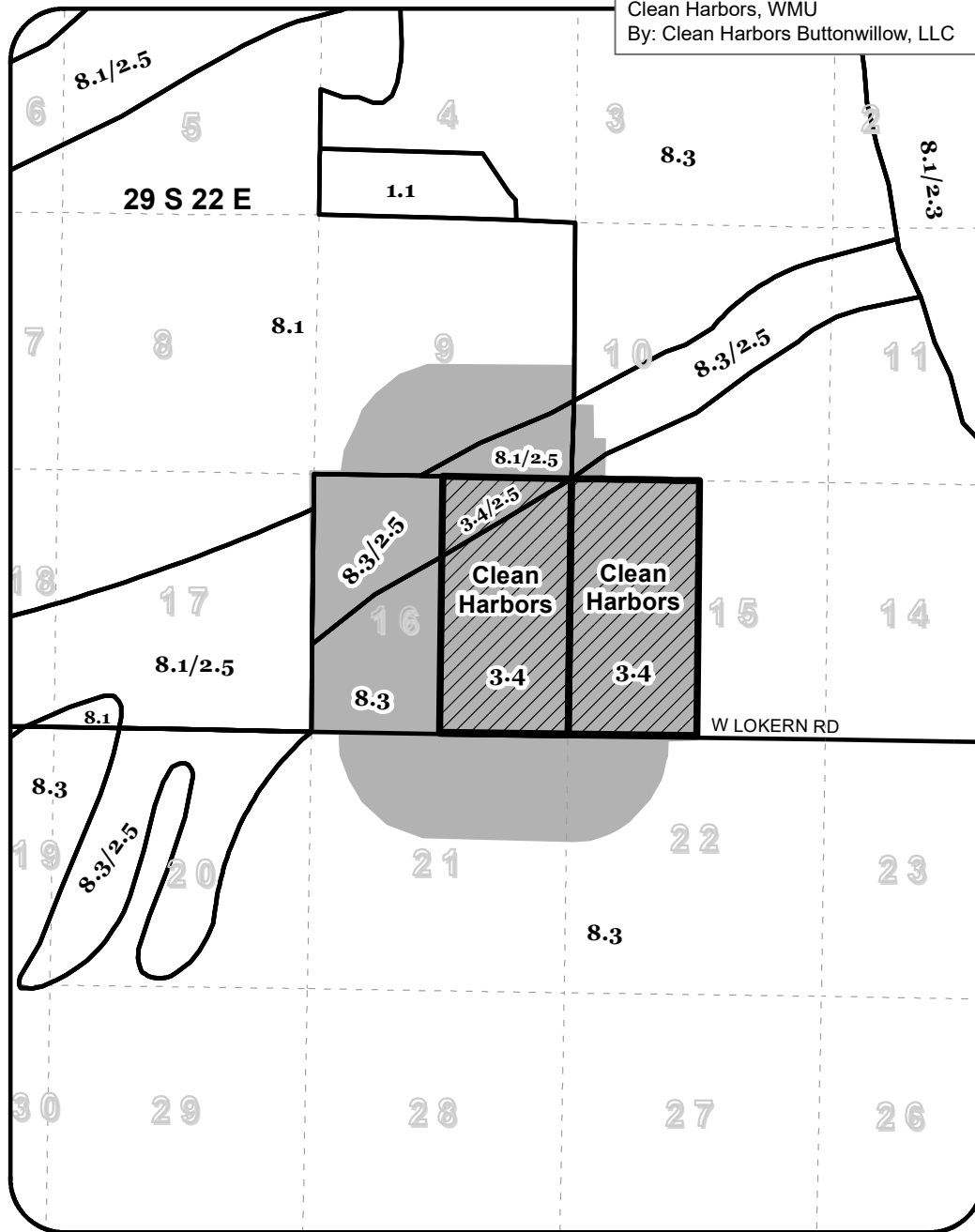
LEGEND		SITE LOCATION		
	Landfill	E 1/2 of Section 16, W 1/2 of Section 15, T.29S., R.22E., M.D.B & M.		
	2000 ft Buffer	APPENDIX "E" MAP		MAY 2020
	GP DESIGNATIONS	See Kern County Planning Dept. for "Official" General Plan Map Code Designations		
	Sections			

SOURCE: Kern County 2020
 2020

FIGURE 3-12

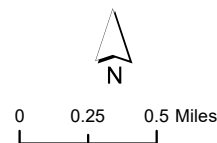
Kern County General Plan and Clean Harbors Existing General Plan with Buffer

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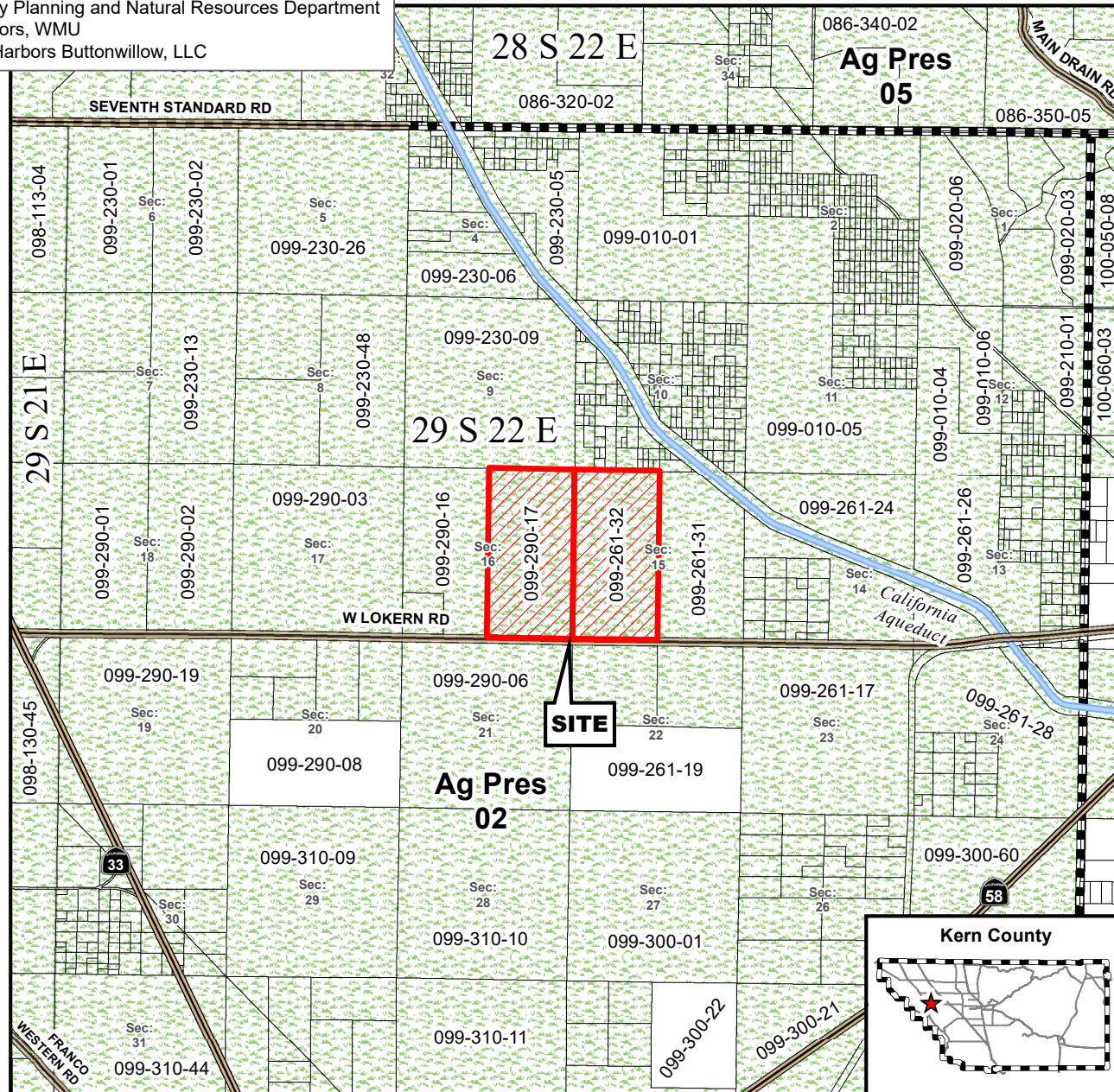
CLEAN HARBORS BUTTONWILLOW, LLC









LEGEND		SITE LOCATION	
	Landfill	E 1/2 of Section 16, W 1/2 of Section 15,	
	2000 ft Buffer	T.29S., R.22E., M.D.B & M.	
	GP Designations	PROPOSED APPENDIX "E" MAP	
	Sections	MAY 2020	
		See Kern County Planning Dept. for "Official" General Plan Map Code Designations	

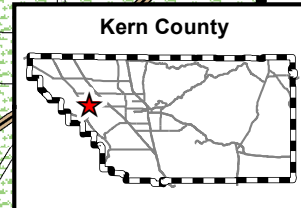


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-  Site
-  Ag Preserve Boundary
-  Ag Preserve Included
-  Highways
-  Arterials
-  2020 Parcels
-  Sections
-  Water Courses



Created on 5/1/2020

0 1,500 3,000 4,500 6,000 Feet

SOURCE: Kern County 2020
 2020

DUDEK

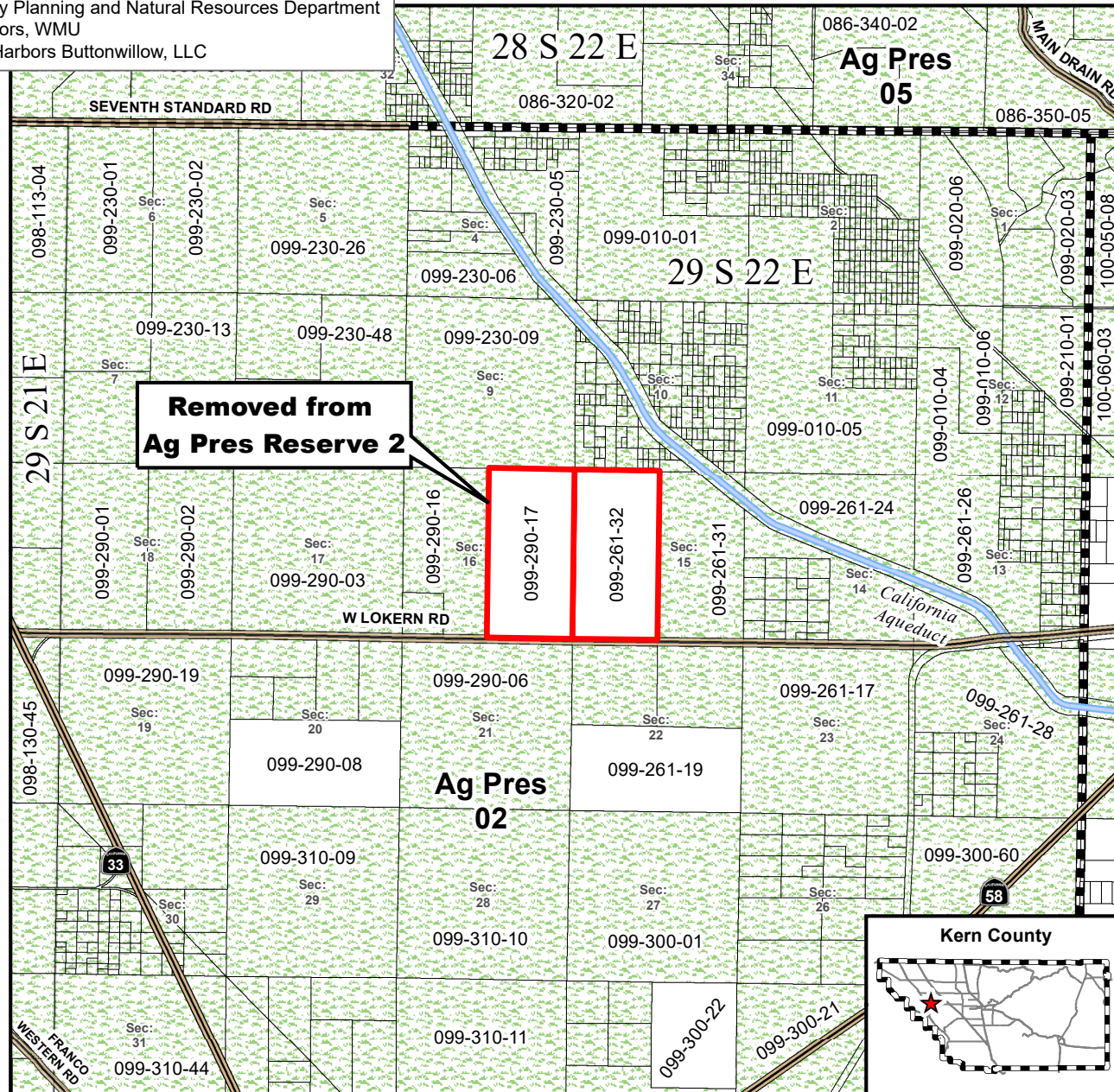
FIGURE 3-14

Clean Harbors Existing Agricultural Preserve Map

Clean Harbors

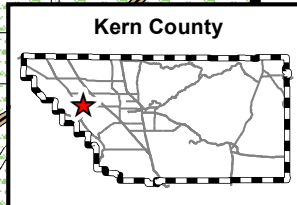
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Kern County Planning and Natural Resources Department
 Clean Harbors, WMU
 By: Clean Harbors Buttonwillow, LLC



**Removed from
 Ag Pres Reserve 2**

- Site
- Ag Preserve Boundary
- Ag Preserve Included
- Highways
- Arterials
- 2020 Parcels
- Sections
- Water Courses



Created on 5/1/2020

0 1,500 3,000 4,500 6,000 Feet

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3.9.4 Local Responsible Agency Approvals

- San Joaquin Valley Air Pollution Control District (SJVAPCD)
 - Authority to Construct
 - Permit to Operate

3.10 Cumulative Projects

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

According to the CEQA Guidelines:

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

- a) *The individual effects may be changes resulting from a single project or a number of separate projects.*
- b) *The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, §15355).*

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

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

As set forth in the CEQA Guidelines, related projects consist of “closely related past, present, and reasonable foreseeable probable future projects that would likely result in similar impacts and are located in the same geographic area” (CCR, Title 14, Division 6, Chapter 3, Section 15355). County files were reviewed to determine the number of permitted or planned projects within a 6-mile radius. The cumulative analysis in Chapter 4 of this Draft EIR is based on a quantitative cumulative analysis of the projects located within this 6-mile radius of the proposed project, as well as growth projections to the year 2030. Different resource-specific analyses use this 6-mile radius unless specific methodology deems other supplemental approaches are appropriate. Projects that are planned but have not been submitted for review or approved by the County are not included in this analysis because there is no way to know or ascertain what they might consist of, be approved, or be completed.

Each environmental topic has a different way of evaluating cumulative effects. Cumulative impact discussions for each environmental topic area are provided at the end of each technical analysis contained within Chapter 4, under “*Impacts and Mitigation Measures.*” **Table 3-7, Cumulative Projects List for Kern County**, lists pending projects within a six-mile radius of the project site pertaining to Kern County projects. These projects were considered when analyzing cumulative conditions and impacts.

TABLE 3-7: CUMULATIVE PROJECTS LIST FOR KERN COUNTY

Zone Map	Project	Location or APN	Acres	Description
75	AERA Energy	Approximately ten miles north of McKittrick	NA	Amend the Circulation Element of the Kern County General Plan to eliminate the section line reservation for a collector roadway on the south half of the north-south midsection line of Section 27, T28S, R21E, MDB&M (GPA #1, Map #75)
97	Revocation of Conditional Use Permit	21992 Highway 33	23,698	Revocation of Conditional Use Permit (Resolution 89-936; approved December 11, 1989) due to noncompliance with required conditions of approval for this permit which allowed a large volume solid waste transfer station in an NR (20) (Natural Resource -20 acres) District.
76, 97, 98, 118, 120, 119	Chevron Lokern Habitat Conservation Plan (HCP)	086-320-92	13,333	Habitat Conservation Plan for Chevron’s North American Exploration and Production Unit in the Lokern Area of the Southern San Joaquin Valley, Kern County, CA. General Plan Amendment (GPA) 5 Map 76, GPA 5 Map 97, GPA 2 Map 98, GPA 7, Map 118, GPA 2 Map 120, and GPA 3 Map 119
118	Chevron USA	157-040-13	153.79	CUP #12 Map #118 Privately owned communication tower
118	Berry Petroleum	157-110-01	25.02	Conditional Use Permit, Map 118-21, New Oil Wells

TABLE 3-7: CUMULATIVE PROJECTS LIST FOR KERN COUNTY

Zone Map	Project	Location or APN	Acres	Description
96	AT&T Mobility c/o Eukcon Group	098-112-02	NA	CUP. Required for new wireless telecom facility. Setback Variance request for new wireless telecom facility. A reduced setback from Highway 33. MAP 96.
118, 138	Carbon Terra Vault	Skyline Drive and Elk Hills Road	9,310	Carbon capture and storage facility. EIR in process.
51, 74, 75	Carbon Frontier	Lerdo Hwy and SR 33	12,738	Carbon capture and storage facility. EIR in process.

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4.1.1 Introduction

This section of the Environmental Impact Report (EIR) discusses impacts associated with the potential for the project to degrade the existing visual character or quality of the project site and its surroundings through changes in the existing landscape. Potential effects are evaluated relative to important visual features (e.g., scenic highways, scenic features) and the existing visual landscape and its users. Degradation of the visual character of a site is addressed through a qualitative evaluation of the changes to the aesthetic characteristics of the existing environment, and the project-related modifications that would alter the visual setting. A visual simulation was prepared for the proposed project. The terms and concepts presented in the discussion below are used to describe and assess the aesthetic setting and impacts from the project.

Visual Concepts and Terminology

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

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

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

Scenic vista – an area identified or known for high scenic quality. Scenic vistas may be designated by a federal, State, or local agency. Scenic vistas can also include an area that is designated, signed, and accessible to the public for the express purposes of viewing and sightseeing.

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

Sensitive receptors or sensitive viewpoints – viewer responses to visual settings are inferred from a variety of factors, including distance and viewing angle, type of viewers, number of viewers, duration of view, and viewer activities. The viewer type and associated viewer sensitivity are distinguished among project viewers in recreational, residential, commercial, military, and industrial areas. Viewer activities can range from a circumstance that encourages a viewer to observe the surroundings more closely (such as recreational activities), to discouraging close observation (such as commuting in heavy traffic). Residential viewers typically have extended viewing periods and are generally considered to have high visual sensitivity. For this reason, residential views are typically considered sensitive. Viewers from public parks, recreational trails, and/or culturally important sites also have high visual sensitivities; therefore, such locations are considered sensitive viewpoints. Viewers in commercial, military, and industrial areas are not

typically focused on the views and the areas do not promote enjoyment of views; therefore, viewers in these locations are assumed to have low sensitivity.

Viewing distance zones – the landscape is subdivided into three distance zones based on relative visibility from travel routes or observation points. The three zones are: foreground, middle ground, and background. The foreground zone includes areas less than ¼ mile away, the middle ground zone includes areas ¼ mile to 3 miles away, and the background zone includes areas beyond 3 miles (FHWA 2015).

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

Residents and recreational users (e.g., hikers, equestrians, tourists, etc.) are expected to be highly concerned with scenery and landscape character. Local motorists who commute daily through the same landscape may have a moderate concern for scenery, while people who work within highly urbanized areas may generally have a lower concern for scenic quality or changes to existing landscape character.

The visual sensitivity of a landscape is affected by the viewing distances at which it is seen. 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).

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

4.1.2 Environmental Setting

Regional Character

The project site is approximately 3 miles east of State Route 33 (SR-33) and approximately 4 miles west of State Route 58 (SR-58). As discussed in Chapter 3, *Project Description*, of this EIR, the project is approximately 25 miles west of the City of Bakersfield, 8 miles west of Buttonwillow, approximately 7 miles north of McKittrick, approximately 15 miles south of Lost Hills, and approximately 20 miles north of Taft (**Figure 3-1**, *Project Vicinity Map*).

The surrounding land in the project vicinity is generally underdeveloped, with the majority of surrounding land zoned for agriculture land use (**Figure 3-5**, *Existing Zoning Classification* in Chapter 3. Development

within the project vicinity also includes rural access roads, scattered rural residences, producing and non-producing oil wells, off-highway vehicle use, electrical transmission lines, and solar energy projects. The California Aqueduct is located east of the project site, within 1/3 mile at the closest point. Primary access to the project site from the regional transportation system would be gained by exiting either SR-58 or SR-33 on to Lokern Road. SR-58 (McKittrick Highway) is approximately 4 miles to the east of the project area and SR-33 (West Side Highway) is approximately 3 miles west of the project area.

Local Character

Topography of the project site and surrounding area is relatively flat. Within the project site, topography of the land gently slopes downward towards the northeast with elevations ranging from approximately 335 feet above mean sea level (msl) near the northeast corner to 415 feet above msl near the southwest site boundary.

The project site consists of developed and undeveloped visual environment. The developed or cultural landscape of the project site consists of the existing solid waste disposal Facility. While the visual attributes of the Facility contrast with the surrounding undeveloped and agricultural land uses, it has been in continuous operation at this location since 1982 and is therefore an expected visual element in the landscape. The undeveloped or natural landscape of the project site (the proposed expansion area) consists of shrubland, and semi-natural grassland. The sparse, low-lying vegetation and the flat terrain found in the undeveloped portion of the project site is harmonious with the adjacent undeveloped area but lacks memorable or vivid features. The developed and undeveloped environment's existing visual quality of the project site is considered low to moderate.

There are no residences or other sensitive receptors on the project site. The nearest residential area is located 2.5 miles northeast of the project site. The primary public view of the project site is from W. Lokern Road, which is relatively flat. The Facility is not clearly visible until travelers are fairly close. Viewer sensitivity is considered low to moderately low due to roadway speed, limited views of the project site, and viewers focus on the roadway.

Scenic Highways

According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System, there are no Designated State Scenic Highways within Kern County (see Section 4.1.3, *Regulatory Setting*, below for more information on the State Scenic Highway Mapping System). The closest Officially Designated Scenic Highway is State Route 33 (SR-33) (portion north of State Route 58 [SR-58]) located 42 miles south of the project site in the County of Santa Barbara. The closest Eligible Scenic Highways in the County are State Route 14 (SR-14) (portion north of SR-58) located approximately 84 miles southeast of the project site, and SR-58 (portion east of SR-14) located approximately 85 miles southeast of the project site (Caltrans 2021b).

Lighting Environment

The westerly half of the project site contains the existing solid waste Facility and features both interior and exterior lighting. The easterly half of the project site, the expansion parcel, includes no light sources. Very few sources of light are present in the immediate surroundings due to the rural character of the surrounding area. The main sources of nighttime lighting are the light poles placed around the existing waste disposal

facilities and temporary portable lighting used for operation, as needed. In addition, another source of nighttime lighting, although insubstantial, is from motorists passing through the area with headlights on.

4.1.3 Regulatory Setting

Federal

There are no applicable federal regulations regarding the project visual environment.

State

California Scenic Highway Program

Caltrans manages the California Scenic Highway Program, which was created in 1963 by the California legislature to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The program includes a list of highways that are designated or eligible for designation as scenic highways. A highway may be designated as scenic based on certain criteria, including how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view. State laws governing the Scenic Highway Program are found in Sections 260 through 263 of the Streets and Highways Code.

As described in Section 4.1.2, Environmental Setting, there are no Designated State Scenic Highways within Kern County. The closest Eligible Scenic Highways in Kern County to the project site are SR-14 (portion north of SR-58) located approximately 84 miles southeast of the project site, and SR-58 (portion east of SR-14) located approximately 85 miles southeast of the project site (Caltrans 2021b).

Local

Kern County General Plan

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

The Kern County General Plan does not identify any significant resources or Scenic Routes within the vicinity of the proposed project; therefore, no policies regarding development within Scenic Routes would be applicable to the project. However, the Kern County General Plan provides general goals and policies for design features of development projects in order to reduce their impacts to scenic resources. The policies and implementation measures in the Kern County General Plan for aesthetic resources applicable to the proposed 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

1.10.7 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

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.

Kern County Zoning Ordinance

Chapter 19.81, Dark Skies Ordinance (Outdoor Lighting)

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

Objective 1: Encourage a safe, secure, and less light-oriented night-time environment for residents, businesses and visitors.

Objective 2: Promote a reduction in unnecessary light intensity and glare, and to reduce light spillover onto adjacent properties.

Objective 3: Protect the ability to view the night sky by restricting unnecessary upward projections of light.

Objective 4: Promote a reduction in the generation of greenhouse gases by reducing wasted electricity that can result from excessive or unwanted outdoor lighting.

Kern County Development Standards

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

4.1.4 Impacts and Mitigation Measures

Methodology

The project's potential impacts to aesthetics have been evaluated using a variety of resources. In general, the potential aesthetic, light, and glare impacts associated with development projects are evaluated on a qualitative basis. The potential impacts to visual resources within the vicinity of the project site were qualitatively evaluated based on the following criteria: (1) existing visual quality and scenic attributes of the landscape; (2) location of sensitive receptors in the landscape; (3) assumptions about receptors' concern for scenery and sensitivity to changes in the landscape; (4) the magnitude of visual changes in the landscape that would be brought about by implementation, construction, and operation of the proposed project; and (5) compliance with State, County, and local policies for visual resources.

This method includes:

Defining the project and its visual setting by assessing the project proponent's submitted project application materials, including plans and descriptions, and reviewing Google Earth Pro aerial photographs and street-level photography, Kern County Geographic Information System (GIS) topographic and land use data, and U.S. Geological Survey (USGS) topographic data;

Conducting a field visit in September 2022 of the project site and vicinity to document the following:

- a. Project site's visual characteristics.
- b. Project vicinity's visual characteristics.
- c. Establish a visual characteristic baseline.
- d. Location of visual (sensitive) receptors in the vicinity.

Establishing Key Observation Points (KOPs) within vicinity from which to evaluate potential visual impacts resulting from implementation of the proposed project.

Preparing visual simulations of post-development views from the KOPs.

Assessing the project's impacts to sensitive views by applying the visual quality rating system to each of the visual simulations.

Proposing methods to mitigate any potentially significant visual impacts identified.

The evaluation of project impacts is based on professional judgment, analysis of the Kern County General Plan goals and policies related to visual resources, and the significance criteria established by CEQA *Guidelines*, Appendix G. More detailed information on the methodology behind the selection of KOPs and rating Visual Quality is provided below.

Selection of Key Observation Points

KOPs are single viewpoints that appropriately reflect the impact implementation of the project would have on one or more sensitive receptors. Sensitive receptors near the site fall into the following categories: motorists, employees and residents. KOPs were identified based on review of a review of aerial maps and consultation with County staff.

The process of identifying KOPs focused on selecting viewpoints that could be used to accurately represent views from a range of viewpoints accessible to the public.

Four KOPs were selected for visual simulation to create post-development views. The evaluated KOPs are mapped on **Figure 4.1-1, Key Observation Points** and described in **Table 4.1-1, Key Observation Points**. The views of the project site from the KOPs are shown in **Table 4.1-2, Key Observation Points**.

TABLE 4.1-1: KEY OBSERVATION POINTS

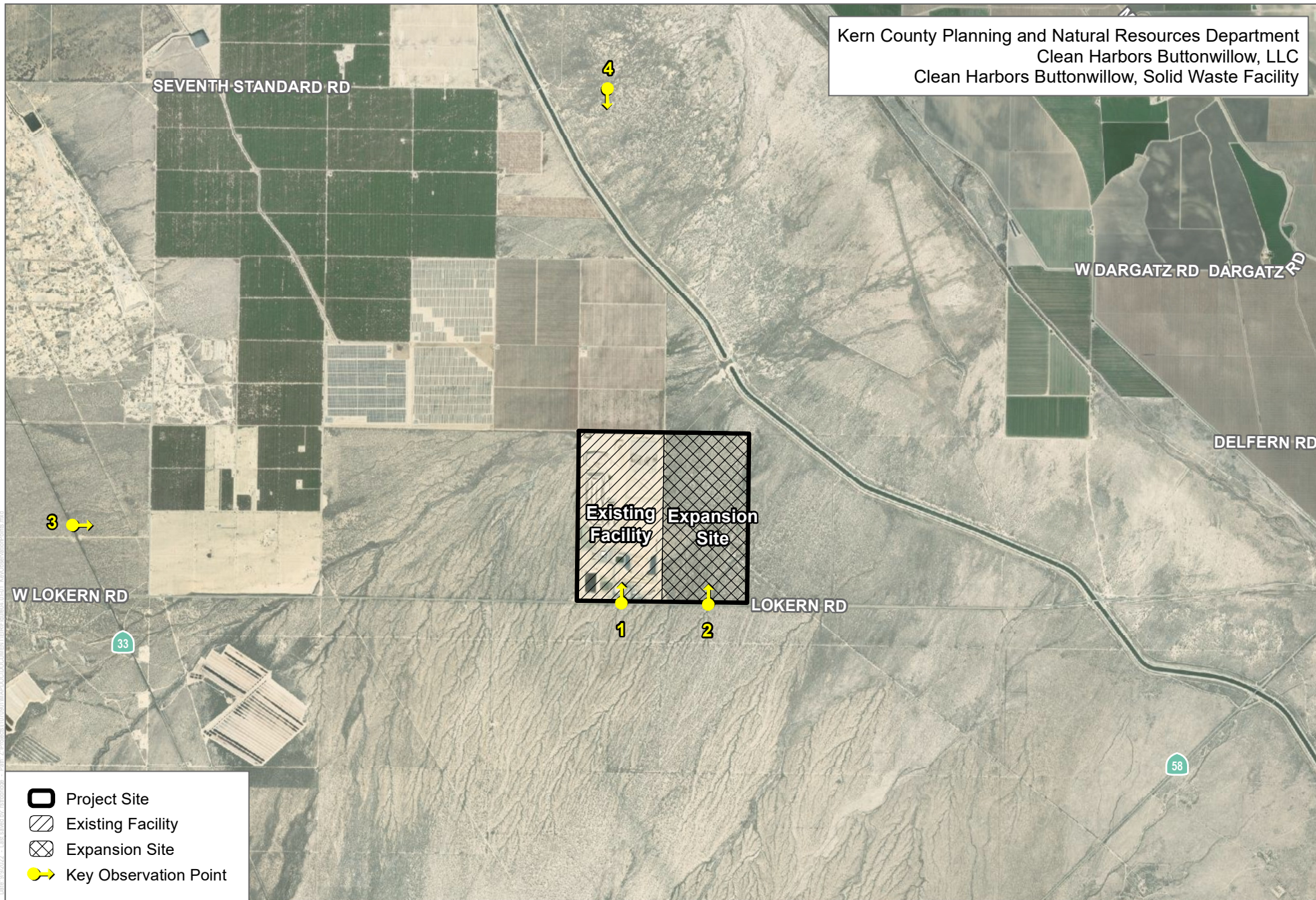
KOP	Location	Representative Sensitive Viewers
1	Lokern Road looking north toward the Facility entrance and truck scales	Visitors to the facility and motorists passing the facility on Lokern Road
2	Lokern Road looking north toward the proposed expansion area.	Motorists passing the proposed soil storage areas (expansion site) on Lokern Road
3	SR-33 looking east toward the existing Facility and proposed expansion area.	Motorists on SR-33
4	Seventh Standard Road looking south toward the existing Facility and proposed expansion area.	Motorists on Seventh Standard Road

Viewing Locations

Existing land uses in the project area include vacant land, land used for solar energy, oils and gas facilities, roadways, agricultural lands, and the California Aqueduct. Lokern Road is the only public roadway adjacent to or that provide a clear view of the project site. All lands adjacent to the project site are either occupied by agricultural private lands or vacant land (disturbed shrubland/grassland). The primary viewing location of the project site is the public right of way, Lokern Road, which is adjacent to the southern edge of the project site and provides primary access to the site.

The existing views of the project site are shown in **Figure 4.1-2, Existing Views**. The views correspond to the KOPs shown in Figure 4.1-1.

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SOURCE: NAIP 2016, USDA NRCS

2022

DUDEK



0 2,000 4,000 Feet

FIGURE 4.1-1
Key Observation Points

Clean Harbors

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View 1



View 2



View 3



View 4

SOURCE: Dudek, 2023
2023

DUDEK

FIGURE 4.1-2
Existing Views
Clean Harbors

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Simulation Preparation

Visual simulations of the project after project implementation were prepared. For the existing facility, the visual simulation shows completion and closure of WMU 35. The topography of the closed WMU is based on the closure plan provided by the applicant.

The visual simulation of the expansion site is based on the proposed stockpiles as shown in Figure 3-9. Topography of the stockpiles is based on the proposed site plan.

Autodesk Civil 3d software was used to create true scale terrain models for the landfill and stockpile surfaces. It was also used to accurately locate the photo location in the real world. The 3d terrain models and camera locations were imported into Autodesk 3d Studio Max software. Within 3d Studio Max, lights are added and the cameras are rendered to high resolution images. Final edits are done using Photoshop to photo edit foreground features back in front of the rendering.

The visual simulations, corresponding to each KOP, are shown in **Figure 4.1-3, Visual Simulations**.

Rating Visual Quality

“Visual quality” is a measure of a landscape or view’s visual appeal. This analysis determines visual impacts by evaluating changes to the existing visual quality and predicting viewer sensitivity to those changes. As such, visual impacts are measured by the compatibility or incompatibility of the physical changes to the environment that are caused by a project’s scale, form, and materials, which are seen by viewers, and the extent to which viewers care about—or how sensitive viewers are to—how a project changes the environment. Visual impacts can result in beneficial, adverse, or neutral changes to the visual environment and visual quality. Viewers have an inherent understanding of what constitutes project cohesion, which aids in determining the type of impact. The degree to which a project meets the preferred concept of project cohesion determines the level of impact.

Neutral impacts reflect little change to the visual environment and visual quality, retaining the existing landscape composition and vividness. Beneficial impacts can result where visual quality is improved through the enhancement of visual resources or where visual experiences are improved through the creation of new or improved views of resources. The level of beneficial impact is determined by how much a project improves the existing landscape composition and vividness and can range from small to very substantial improvements. Adverse or negative impacts can result when visual quality is degraded through visual resource modification or by blocking or altering views in a negative manner. The level of adverse impact is determined by how much a project degrades the visual landscape and ranges from general negative changes to severe declines in the existing landscape composition and vividness (FHWA 2015). The type and level of impacts for the proposed project are evaluated based on professional judgment, analysis of the Kern County General Plan goals and policies related to visual resources, and the significance criteria established by *CEQA Guidelines*, Appendix G.

Visual Compatibility

Project environment can be affected by the visual character of grading, constructed elements, vegetative cover, infrastructure, and other ancillary visual elements associated with a project that interact to form a composition. These elements are described in more detail in **Table 4.1-2, Visual Character Element of**

Project Environment. These changes affect the natural and cultural environments in the study area and viewers evaluate the project components to determine if the project's composition is compatible or incompatible with the existing visual landscape. This viewer response determines how the existing landscape composition and vividness would be affected by a proposed project.

Viewer Response

Viewers make up the population affected by a project; they are the people whose views of the landscape may be altered by the proposed project, either because the landscape itself has changed or their perception of the landscape has changed. Viewers experience the visual landscape and respond to the natural and cultural environment and the design of built features in those environments.



View 1



View 2



View 3



View 4

SOURCE: Dudek, 2023
2023

DUDEK

FIGURE 4.1-3
Visual Simulations

Clean Harbors

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TABLE 4.1-2: VISUAL CHARACTER ELEMENT OF A PROJECT ENVIRONMENT

Feature	Description of Element	Visual Attributes
Grading	Alteration of the existing landform, or the grading, required to accommodate the project.	The visual character of the physical forms generated by grading, such as grading of active and closed WMUs and the construction of soil stockpiles.
Constructed Elements	Buildings, infrastructure, and structures resulting from project implementation. Project buildings include offices, lab buildings, treatment buildings. Infrastructure can include new roads, parking lots, storage areas, ponds, and utility lines, and telecommunication towers. Structures include fences, culverts, and truck scales.	The visual character of constructed elements is described in terms of their form, scale, massing, and material compared to the existing built and natural environment. The setting and orientation of the structures, interplay between light and shadow, and artistic attributes like color, pattern, and texture also affect visual character. Whether a feature obstructs or generates views is also important.
Vegetative Cover	Vegetation associated with the project, such as hydroseeding for erosion control, and perimeter landscaping. Also, vegetative cover may be removed by project activities.	The visual character of the project’s vegetative cover; its density, distribution, and species composition compared to the existing natural environment. Attributes of the plants (such as seasonal color) and the ecological setting are also important.
Ancillary Visual Elements	May include signage, fencing and gates, bollards, or other features.	Such features contribute to the project’s appearance as components of the project’s visual character, and existing and proposed elements are described in relation to each other.

Table 4.1-3, Viewer Response Ratings, provides descriptions for the seven levels used for determining viewer response, which is in part affected by distance zones. Evaluating visual quality and viewer response must also be based on a regional frame of reference. The same visual resource appearing in different geographic areas could have a different degree of visual quality and associated viewer sensitivity in each setting. For example, a small hill may be a significant visual element on a flat landscape but have very little significance in mountainous terrain.

Viewers have an inherent understanding of visual quality and what constitutes natural harmony, cultural order, and project cohesion. The degree to which a project meets these preferred concepts determines the level of change in visual quality. To assess the degree and level of impacts to visual resources, a visual quality rating is applied to both existing and proposed project conditions. The degree of change from the existing (without project) visual quality to the visual quality with the proposed project is used to determine the level, or intensity, of visual impacts. Intensities may range from being less substantial and reflect little change to the visual environment and visual quality, retaining the existing landscape composition and vividness and the visual quality stays essentially the same (Proposed Visual Quality = Existing Visual Quality). Conversely, impacts may be more substantial when visual quality is degraded through general negative changes to visual resources or by blocking or altering views in a negative manner, decreasing the visual quality (Proposed Visual Quality < Existing Visual Quality). Decreasing visual quality by one value rating is an impact of moderate intensity, whereas decreasing visual quality by more than one value constitutes a more severe impact.

TABLE 4.1-3: VIEWER RESPONSE RATINGS

Response Ratings	Response Descriptions
Very Low (VL)	A very small fraction of total viewers* with instantaneous (e.g., highway speeds) views toward project site. Views of the project site tend to be in the middle ground or background or are highly obscured in the foreground. Negligible interest in the visual landscape.
Low (L)	Very few of total viewers* with instantaneous (e.g., highway speeds) views toward project site. Views of the project site tend to be in the middle ground or background. Little interest in the visual landscape.
Moderately Low (ML)	Few of total viewers* with short (e.g., local roadway speeds) views toward project site in the middle ground or background. May include fewer viewers with instantaneous views of the project in the foreground. Limited interest in the visual landscape.
Moderate (M)	A number of the total viewers* with intermittent (e.g., visitors at parks) views toward project site in the foreground. May include fewer viewers with shorter viewing times of the project in the foreground. May also include viewers with extended (e.g., places of businesses) or permanent (e.g., residents) viewing times of the project in the distant middle ground to closer background towards areas with high community interest. General interest in the visual landscape.
Moderately High (MH)	Many of total viewers* with extended viewing times (e.g., places of businesses) toward project site in the foreground or middle ground. May include fewer viewers with shorter viewing times toward areas with high community interest in the foreground or middle ground. May also include fewer viewers with shorter viewing times toward sensitive visual resource(s) in the distant middle ground to closer background. Invested interest in the visual landscape.
High (H)	Most or all of total viewers* with permanent (e.g., residents) views toward project site in the foreground or middle ground. May include fewer viewers with shorter viewing times toward sensitive visual resource(s) in the foreground or middle ground. Highly invested interest in the visual landscape.
Very High (VH)	May include a variety of viewers with permanent (e.g., residents) or intermittent (e.g., recreationists/tourists) views toward sensitive visual resource(s) of local, national, or global interest. Extremely high invested interest in the visual landscape, due to public awareness of the resource.

* Relative to total number of viewers of the project.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the

existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

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

A project would have a significant impact on 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, would the project conflict with applicable zoning and other regulations governing scenic quality; or
- d. Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.

Project Impacts

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

Scenic vistas are areas identified or known for high scenic quality. Scenic vistas may be designated by a federal, State, or local agency. Scenic vistas can also include an area that is designated, signed, and accessible to the public for the express purposes of viewing and sightseeing. The project site is not designated as a scenic vista. In addition, there are no local areas that are designated as scenic vistas within the vicinity of the project site. Therefore, the project would have no impact on a scenic vista.

Mitigation Measures

No mitigation measures required.

Level of Significance

No impact.

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

As discussed in Section 4.1.2, the closest Officially Designated Scenic Highway is State Route 33 (SR-33) (portion north of State Route 58 [SR-58]) located 42 miles south of the project site in the County of Santa Barbara. The closest Eligible Scenic Highways in the County are State Route 14 (SR-14) (portion north of SR-58) located approximately 84 miles southeast of the project site, and SR-58 (portion east of SR-14) located approximately 85 miles southeast of the project site (Caltrans 2021b).

The project site is not within the viewshed of a scenic highway. Therefore, there is no impact.

Mitigation Measures

No mitigation measures required.

Level of Significance

No impact.

Impact 4.1-3: The project would not, 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).

The project site has been developed as a hazardous and non-hazardous waste disposal Facility since approximately 1982. The area surrounding the Facility are characterized by relatively open land used for agriculture, oil production, or infrastructure, which are similar in nature to the proposed project uses.

The project site consists of the existing Facility and the expansion site. The existing Facility is characterized by active landfill operations. This includes active and closed WMUs which are up to 50 feet higher than the natural surface grade. The landfill operation is supported by various structures such as administrative offices and treatment buildings, roads, truck scales, and utility lines, as shown in View 1, Figure 4.1-2. The visual coherence of the site is low, with various structures, including buildings and utility lines.

The expansion site is relatively flat, consisting of shrubland and semi-natural grasslands, as shown in View 2, Figure 4.1-2. The existing Facility is visible in View 2. The expansion site is characterized by the low vegetation. While more visually intact than the existing Facility, the WMUs are clearly visible adjacent to the expansion site.

Views of the site are limited from other public roads, see Views 3 and 4, Figure 4.1-2. The change in vegetation (due to construction of the WMUs) is somewhat visible from SR 33 (View 3). For motorists

travelling at highway speed it is unlikely the project site would be readily discernable. The project site is not visible from Seventh Standard Road, the closest public road north of the project (View 4).

The Facility will continue to operate in the same location. As the cells in WMU 35 reach capacity and are closed, the grade will increase towards the south side (entrance) of the site. The supporting facilities, such as the truck scales will be moved to the west side of the project. These changes are shown in the simulation of View 1 in **Figure 4.1-3, Visual Simulations**. Although the visual interest is low, the removal of visual clutter makes the site more visually coherent as compared to the existing condition.

The expansion parcel, to the east, will be used only for soil storage. The soil storage would result in flat-topped stockpiles of native soil in the northwesterly portion of the project site, approximately 40 to 50 feet tall. As shown in the simulation of View 2, in Figure 4.1-3, the land form will be altered. However, given the relatively low visual quality of the site, and the existence of similar flat-topped mounds (the WMUs at the existing Facility) adjacent to the expansion stockpiles, the degree of change is relatively low.

As shown in Views 3 and 4, Figure 4.1-3, the visual change is not discernable from the more distant public roads.

Factors Reducing Visual Impacts

The following attributes of the project and elements of the existing conditions would reduce visual impacts of the project:

- The proposed project is consistent with the visual character of the existing Facility and other uses in the area. The active Landfill will have changes to grading and structures, but the visual character and quality will not change. Relocation of existing structures away from the public-facing side of the project would result in a more coherent, less cluttered, visual environment. The existing landform of the expansion site would be altered. stockpiles proposed on the expansion parcel would be 40 to 50 feet tall. The project site has a gentle slope towards the northeast, going from 410 feet above mean sea level (MSL) at the southwest corner to 335 feet above MSL.
- The roads in the immediate project areas do not have scenic designations.
- Viewer sensitivity is low to moderately low, consisting mainly of motorists (primarily non-recreational) and workers in the immediate area.

Summary

Due to the low visual quality of the existing site, the low degree of change, and the low (to moderately low) sensitivity of viewers, the visual impact of the proposed project would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance after Mitigation

Impacts 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.

Regarding night lighting and daytime glare conditions, “light” refers to artificial light emissions, or the degree of brightness, generated by a given source. Regarding glare conditions, the Illuminating Engineering Society of North America (IES 2023) defines “glare” as the sensation produced by luminance in the visual field that is sufficiently greater than the luminance to which the eye has adapted to cause annoyance, discomfort, or loss of visual performance and visibility.

The new parcel that will be used for stockpiling borrow/soils from the existing site and will not have any additional permanent lighting. However, new structures and expansion of the Facility could create additional light and glare impacts, creating a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Construction

Lighting

Construction of the project would generally occur during daytime hours between 6:00 a.m. and 9:00 p.m. and would continue to no later than 9 p.m. in order to meet the construction schedule. No overnight construction is expected to occur. During evening construction, construction crews would use minimal illumination in order to perform the work safely. All lighting would be directed downward and shielded to focus illumination on the desired work areas only, and to prevent light spillage onto adjacent properties. During construction, dusk-to-dawn security lighting would be required for the temporary construction staging area, parking area, construction office trailer entries, and site access points. Lighting is not planned for typical construction activities because construction activities would occur primarily during daylight. Per Mitigation Measure MM 4.1-1, any nighttime construction would use lighting designed to provide the minimum illumination needed, thereby minimizing adverse impacts on any nearby visitors. As a result, construction of the project would result in less than significant impacts to nighttime views.

Glare

Most of the proposed construction activities are planned to occur during daylight hours. Increased truck traffic from transportation of construction materials to the site would temporarily increase glare conditions during construction. However, this increase in glare would be minimal and temporary. Construction activity would occur on focused areas of the site as construction progresses and any sources of glare would not be stationary for a prolonged period of time. Additionally, the surface area of construction equipment would be minimal compared to the scale of the site. Therefore, construction of the project would not create a new source of substantial glare that would affect daytime views in the area and impacts would be less than significant.

Operation

Lighting

As described in more detail in Chapter 3, *Project Description*, of this EIR, the project would include security equipment and lighting. The truck receiving area and main access gate would be lighted for nighttime

operations. Light poles are strategically placed around the existing landfill facilities to provide illumination after daylight hours. Temporary portable lighting is also available on-site for night-time operations, as needed. Lighting would be used from dusk to dawn once the facilities are operational. Restrictions on light fixture height are also imposed by ordinance. If improperly designed or oriented, such lighting may result in light trespass that falls outside the boundaries of the site. Under particularly adverse conditions, spillover lighting causes annoyance, discomfort, or loss in visual performance because of its intensity, direction, or source type and visibility. Thus, if designed improperly, project lighting has the potential to adversely affect nighttime views, resulting in a significant visual impact.

To avoid such impacts, the project would be required to implement Mitigation Measure MM 4.1-1, which requires compliance with the County's Dark Sky Ordinance and for all lighting to be directed downwards and shielded. Following compliance with Mitigation Measure MM 4.1-1, impacts related to lighting would be less than significant during project operation.

Glare

The proposed project facilities would not include any components that would have the potential to produce substantial glare. Vehicles and equipment operating at the facilities could create some glare to motorists traveling along Lokern Road; however, any glare experienced by motorists would be relatively short in duration and would not cause substantial visual impairment. Therefore, impacts related to glare would be less than significant.

Mitigation Measures

MM 4.1-1: Prior to issuance of building permits, the project proponent shall demonstrate to Kern County Planning and Natural Resources Staff, through the submittal of a lighting plan, that the project site complies with the applicable provisions of the *Dark Skies Ordinance* (Chapter 19.81 of the Kern County Zoning Ordinance) 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. Lenses and bulbs shall not be exposed or extend below the shields.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.1-1, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

As shown in **Table 3-8**, *Cumulative Projects List for Kern County*, in **Chapter 3**, *Project Description*, in this EIR, lists pending projects within a six-mile radius of the project site that pertain to Kern County projects. Due to the locations of the cumulative projects, which lack common viewpoints, and the type and scale of the cumulative projects, they are not expected to result in significant cumulative visual impacts in combination with the proposed project. However, to the extent that the cumulative projects would include additional lighting sources, a cumulative increase in nighttime lighting (sometimes referred to as skyglow) may occur.

Compliance with the County's *Dark Skies Ordinance* (Chapter 19.81 of the Kern County Zoning Ordinance) would reduce the contribution of the cumulative projects to a less than significant level. Compliance of the proposed project with this ordinance has been incorporated into Mitigation Measure 4.1-1.

Mitigation Measures

Kern County

Implementation of Mitigation Measure MM 4.1-1

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.1-1, cumulative impacts would be less than significant.

Section 4.2

Agriculture and Forest Resources

4.2.1 Introduction

This section of the EIR describes the affected environment and regulatory settings for agriculture and forest resources for the project. It also describes the impacts on agricultural and forest resources that would result from the implementation of the project, and includes mitigation measures that would reduce these impacts, where applicable. This section is based, in part, on information provided in the Kern County Annual Crop and Livestock Report (2021) prepared by the Kern County Department of Agriculture and Measurement Standards and information from the California Department of Conservation.

4.2.2 Environmental Setting

Regional Setting

Kern County covers approximately 8,163 square miles (5,224,258 acres) including 1,324 square miles (847,383 acres) of harvested agricultural land and approximately 2,262 square miles (1,448,000 acres) of grazing land. According to the 2021 Kern County Agricultural Crop Report, agriculture in Kern County was worth approximately \$8.34 billion in 2021, which is an increase of nine-percent from the 2020 crop value. The top five commodities for 2021 were grapes, citrus, almonds, pistachios, and milk, which made up more than \$6.3 billion (75 percent) of the total value, with the top twenty commodities making up more than 95 percent of the total value (Department of Agriculture and Measurement Standards 2022).

Kern County is a growing population and like many agriculturally based jurisdictions, must balance urbanization and the loss of farmland. As shown in **Table 4.2-1, 2016-2018 Land Use County of Kern Conversion in Kern County**, the California Department of Conservation found that 6,075 acres of Important Farmland, including all of the categories of important farmland, grazing land, and other land, were converted to non-agricultural uses between 2016 to 2018. Approximately 5,905 net acres were converted from agricultural and other uses to urban/built-up land from 2016 to 2018 (DOC 2018). (Note: These various farmland designations are defined in Section 4.2.3, *Regulatory Setting*, below).

TABLE 4.2-1: 2016-2018 LAND USE CONVERSION IN KERN COUNTY

Land Use Category	Total Acres 2016	Net Acres Changed	Total Acres 2018
Prime Farmland	579,297	-5,362	573,935
Farmland of Statewide Importance	209,484	-1,161	208,323
Unique Farmland	91,321	447	91,768
Farmland of Local Importance	0	0	0
Important Farmland Subtotal	880,102	-6,076	874,026
Grazing Land	1,849,267	5,374	1,854,641

TABLE 4.2-1: 2016-2018 LAND USE CONVERSION IN KERN COUNTY

Land Use Category	Total Acres 2016	Net Acres Changed	Total Acres 2018
Agricultural Land Subtotal	2,729,369	-702	2,728,667
Urban and Built-Up Land	159,178	5,906	165,084
Other Land	2,325,915	-4,389	2,321,526
Water Area	9,853	-815	9,038
Non-Agricultural Land Subtotal	2,494,945	702	2,495,648
Total Area Inventoried	5,224,315	0	5,224,315

Source: DOC, 2018

According to Kern Economic Development Corporation (KEDC), it is estimated that the total population of Kern County will reach approximately 1,127,871 individuals in 2040 (KEDC 2022), growing from 2021's population of approximately 909,813 (DOF 2022). The anticipated growth in population will most likely decrease the amount of agricultural land in Kern County even further. However, it is important to note, the conversion of agricultural land is affected by numerous factors other than population growth and urban development. Actual production is dependent on commodity prices, water prices and supply, labor, the proximity of processing and distribution facilities, and pest management. Factors such as weather, trade agreements, and labor disputes can also affect decisions regarding what crops are grown and which lands go in and out of production. Most conversion of Prime or Farmland of Statewide Importance agricultural lands is occurring within the planned development footprint of Metropolitan Bakersfield. Very little conversion of the most productive agricultural lands has occurred in outlying areas of the County.

Local Setting

The 640-acre project site does not currently support agricultural uses. The existing solid waste Facility occupies the westerly 320-acre parcel, while the 320-acre expansion site is vacant.

The project site is subject to the provisions of the adopted Kern County General Plan and the Kern County Zoning Ordinance. The site has Map Code Designations of 8.3 (Exclusive Agriculture), 3.4 (Solid Waste Facility), and 3.4/2.5 (Solid Waste Facility/Flood Hazard) by the Kern County General Plan and is entirely within the A (Exclusive Agriculture) Zone District. The project site is located within Agricultural Preserve No. 2 (see **Figure 4.2-1**, *Clean Harbors Existing Agricultural Preserve Map*). There are no Williamson Act Contracts associated with the project site.

As depicted in **Figure 4.2-2**, *Farmland Mapping and Monitoring Program Designations*, the project site is not designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance by the CDOC. The California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) 2018 Important Farmland Map, designates APN 099-290-17 as "Urban and Development" and APN 099-261-32 as "Grazing Land." Surrounding properties are designated as: "Prime Farmland", to the north, and "Grazing Land".

4.2.3 Regulatory Setting

Federal

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

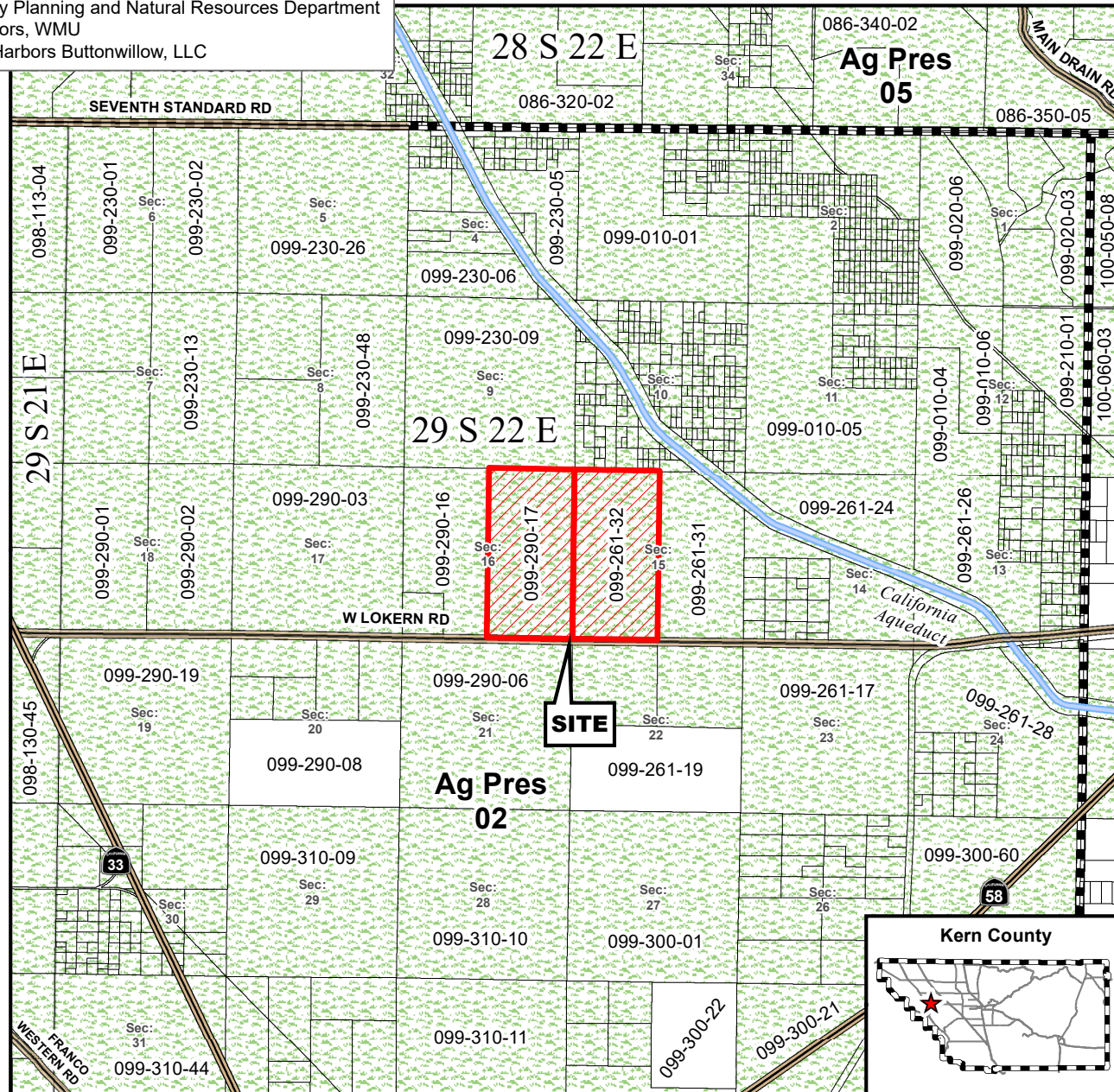
The purpose of the Farmland Protection Policy Act (FPPA) is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It additionally directs federal programs to be compatible with State and local policies for the protection of 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 forestland, pastureland, or other land but not urban and built-up land or water. FPPA assures that, to the extent possible, federal programs are administered to be compatible with State, and local units of government, and private programs and policies to protect farmland.









In 1981, Congress passed the Agriculture and Food Act (Public Law 97-98) which contained the FPPA, Subtitle I of Title XV, Section 1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1994. Federal agencies are required to develop and review their policies and procedures related to implementing the FPPA every 2 years.

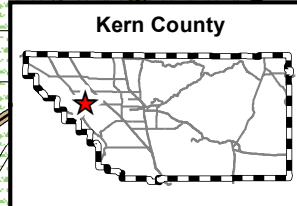
The FPPA does not authorize the federal government to regulate the use of private or nonfederal land or, in any way, affect the property rights of owners. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or rely on assistance from a federal agency (NRCS 2019).

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Kern County Planning and Natural Resources Department
 Clean Harbors, WMU
 By: Clean Harbors Buttonwillow, LLC




-  Site
-  Ag Preserve Boundary
-  Ag Preserve Included
-  Highways
-  Arterials
-  2020 Parcels
-  Sections
-  Water Courses



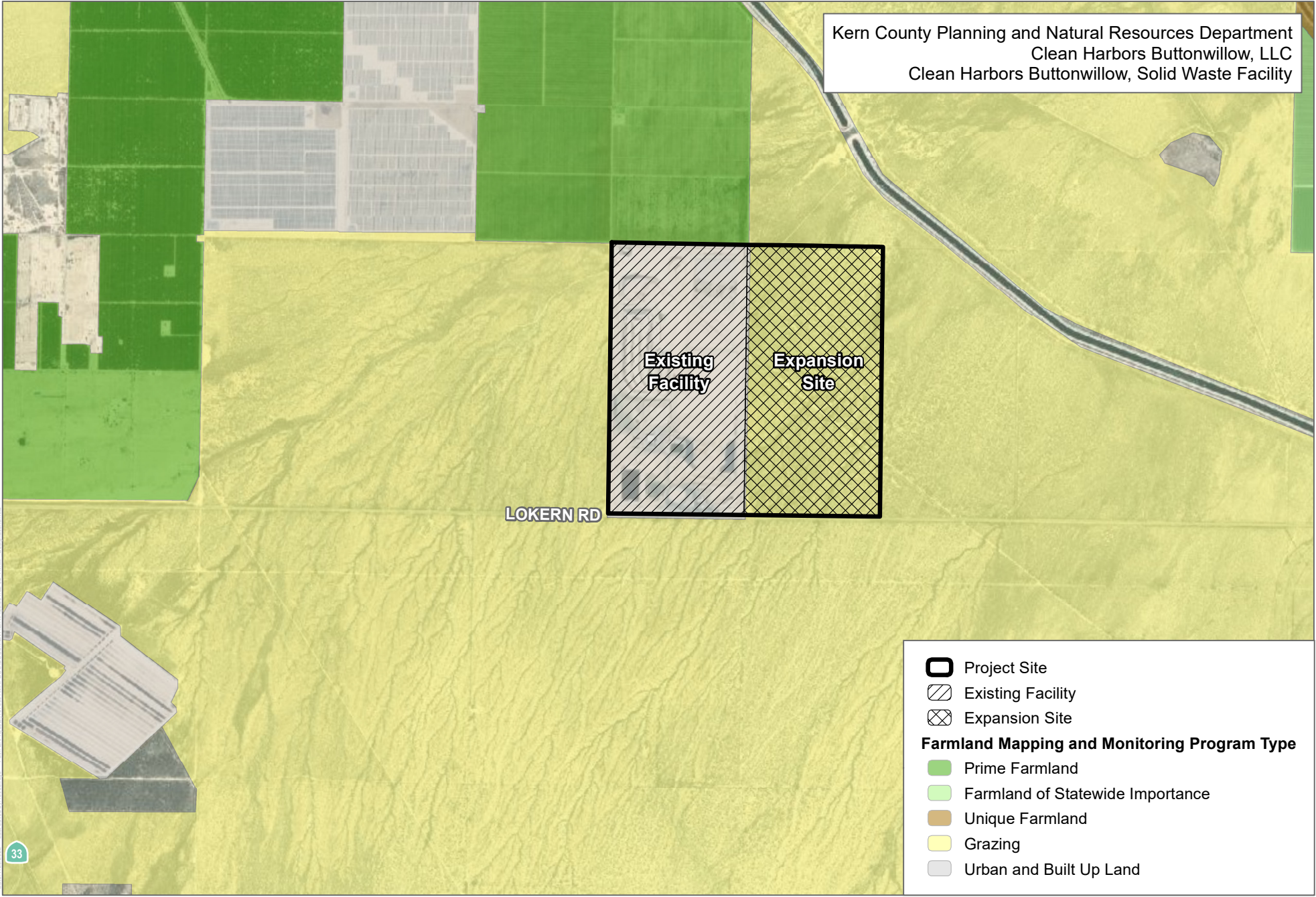
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Kern County Planning and Natural Resources Department
 Clean Harbors Buttonwillow, LLC
 Clean Harbors Buttonwillow, Solid Waste Facility



SOURCE: NAIP 2016, CA Dept. of Conservation 2018

2022

FIGURE 4.2-2
 Farmland Mapping and Monitoring Program Designations

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State

California Department of Conservation (DOC), Division of Land Resource Protection

The DOC applies the 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 (DOC 2019) 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."

Prime Farmland. Farmland with 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. Farmland 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. Farmland 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. Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. In some counties, Confined Animal Agriculture facilities are part of Farmland of Local Importance.

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 interested in the extent of grazing activities.

Urban and Built-Up Land. Land 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. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Other Land. Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

The Rural Land Mapping Project provides more detail on the distribution of various land uses within the Other Land category in nine FMMP counties, including all eight San Joaquin Valley counties. The project may be expanded to the entire FMMP survey area as funding becomes available. The Rural Land categories include:

- Rural Residential Land (R)
- Semi-Agricultural and Rural Commercial Land (sAC)
- Vacant or Disturbed Land (V)
- Confined Animal Agriculture (CI)
- Nonagricultural or Natural Vegetation (nv)
- Water (W) -- Perennial water bodies with an extent of at least 40-acres

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 (DOC 2019).

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

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

conditions or mitigations would otherwise be considered incompatible. However, this may occur only if that use meets the following conditions:

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

The project site is not subject to a Williamson Act contract. There are contracted lands located north and west of the project site, as shown in **Figure 4.2-3, *Williamson Act Lands***.

Farmland Security Zone Act

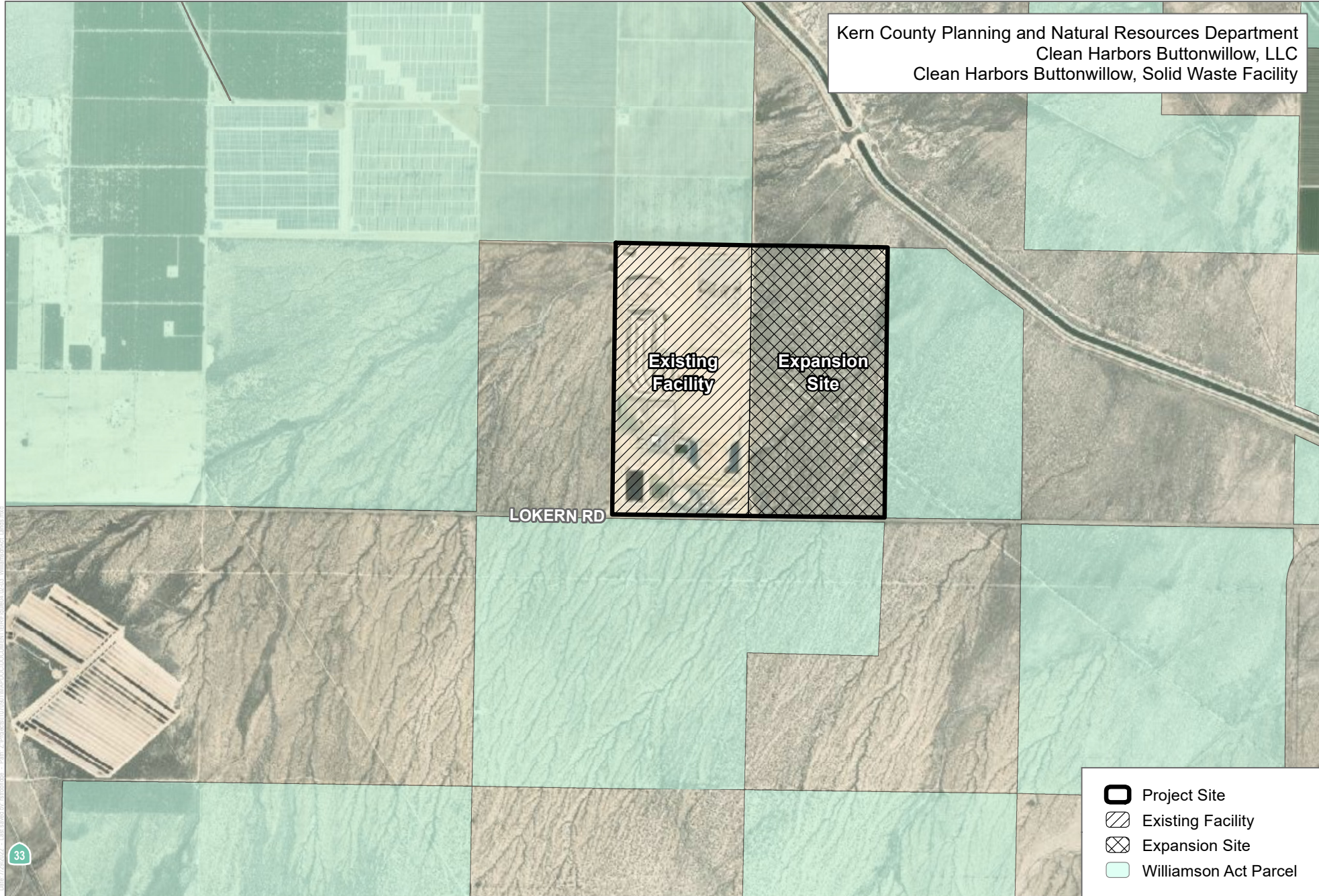
The Farmland Security Zone Act is similar to the Williamson Act. It was passed by the California State Legislature in 1999 to ensure that long-term farmland preservation is part of public policy in the State. Farmland Security Zone Act contracts are sometimes referred to as “Super Williamson Act Contracts.”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

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Kern County Planning and Natural Resources Department
Clean Harbors Buttonwillow, LLC
Clean Harbors Buttonwillow, Solid Waste Facility



SOURCE: NAIP 2016, CA Dept. of Conservation 2018

2022

DUDEK



0 1,000 2,000 Feet

FIGURE 4.2-3
Williamson Act Lands
Clean Harbors

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Local

Kern County General Plan

The Kern County General Plan (adopted in 2009) 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 four (4) designations for agricultural land:

- **8.1 Intensive Agriculture (minimum parcel size 20 acres gross)** – Lands devoted to the production of irrigated crops or having potential for such use.

Uses shall include, but are not limited to, the following: Irrigated cropland; orchards; vineyards; horse ranches; raising of nursery stock ornamental flowers and Christmas trees; fish farms' bee keeping' ranch and farm facilities and related uses; one single-family dwelling unit; cattle feed yards; dairies; dry land farming; livestock grazing; water storage; groundwater recharge acres; mineral; aggregate; and petroleum exploration and extraction; hunting clubs; wildlife preserves; farm labor housing; public utility uses; and agricultural industries pursuant to provisions of the Kern County Zoning Ordinance, and land within development areas subject to significant physical constraints.

- **8.2 Resource Reserve (minimum parcel size is 20-acres gross, except 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. Additionally, the designation of 8.5 (Resource Management) can be used for agricultural uses such as dry-land farming and ranch facilities.

The policies, goals, and implementation measures in the Kern County General Plan for agricultural resources applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to

development such as the proposed project. Therefore, they are not listed below, but as stated in Chapter 2, *Introduction*, all policies, goals, and implementation measures in the Kern County 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 which will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources, or diminish the other amenities which exist in the County.

Goal 2. Protect areas of important mineral, petroleum, and agricultural resource potential for future use.

Goal 5. Conserve prime agriculture lands from premature conversion.

Policies

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

Policy 5. Areas of low intensity agriculture use (Map Code 8.2 (Resource Reserve), Map Code 8.3 (Extensive Agriculture), Map Code 8.5 (Resource Management) should be of an economically viable size in order to participate in the State Williamson Act Program/Farmland Security Zone Contract.

Policy 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.

Implementation Measure

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

Kern County Zoning Ordinance

The Kern County Zoning Ordinance, Title 19 of the Ordinance Code of Kern County, establishes basic regulations under which land is developed. This includes allowable uses, building setback requirements, and development standards. Pursuant to state law, the zoning ordinance must be consistent with the Kern County General Plan. The basic intent of the Kern County Zoning Ordinance is to promote and protect the public health, safety, and welfare via the orderly regulation of the land uses throughout the unincorporated area of the county. The zoning ordinance applies to all property in unincorporated Kern County, except land owned by the United States or any of its agencies.

The project site is within the A (Exclusive Agriculture) zone district. Allowable land uses within an A zone are set forth in Sections 19.12.020 and 19.12.030 of the Kern County Zoning Ordinance and include growing and harvesting crops, breeding and raising animals and agricultural industries. Other allowable uses, including sanitary landfills and hazardous waste disposal facilities, require a conditional use permit (CUP).

The proposed zone district of M-3 (Heavy Industrial) allows for heavy manufacturing and industrial land uses as set forth in Sections 19.40.020 and 19.40.040 of the Kern County Zoning Ordinance. These uses may result in traffic, noise, odors, dust, and vibrations and are therefore separated from residential areas. The M-3 zone district allows landfill operations, including hazardous material disposal by approval of a CUP.

Kern County Agricultural Preserve Program

The Kern County Agricultural Preserve Program breaks Kern County into 21 different Agricultural Preserves. The project site is included within the boundaries of Agricultural Preserve No. 2 and is identified as agriculturally preserved land. According to the DOC, an agricultural preserve defines the boundary of an area within which a city or county has the ability to enter into an agricultural contract with landowners. The agricultural preserve boundary is designated by resolution of the board of supervisors or city council having jurisdiction. Only land located within an agricultural preserve is eligible for a Williamson Act Contract. Preserves are regulated by rules and restrictions designated in the resolution to ensure that the land within the preserve is maintained for agricultural or open space use. As noted above the project site does not contain land identified as an Agricultural Preserve and the project area is not under an active Williamson Act contract.

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, dairies, 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). However, the project site does not contain lands under an active Williamson Act contract and, therefore, is not subject to these rules.

4.2.4 Impacts and Mitigation Measures

Methodology

The proposed project's potential impacts on agriculture and forest resources have been evaluated on a qualitative basis by reviewing the 2020 *Kern County Agricultural Crop Report*, the 2018 DOC Important Farmland Map, and the DOC 2016–2018 Land Conversion in Kern County. A change in land use would normally be determined to be significant if the effects described in the thresholds of significance were to occur (see CCR Title 14, Section 15064.7(a)). The evaluation of project impacts is based on a thorough analysis of the Kern County General Plan's applicable goals and policies related to agricultural resources, professional judgment, and the significance criteria established by CEQA.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify, per Appendix G of the CEQA Guidelines, that 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 use;
- b. Conflict with existing zoning for agricultural use or Williamson Act Contract;
- c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526) or timberland zoned Timberland Production (as defined by Government Code Section 51104 (g)).
- d. Result in the loss of forestland or conversion of forest land to non-forest use.
- e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use; or

- f. Result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Section 15206(b)(3) Public Resources Code.

Kern County determined in the NOP/IS that the following environmental issue areas would result in no impacts, and therefore, are scoped out of this EIR. Please refer to Appendix A of this EIR for a copy of the NOP/IS and additional information regarding these issue areas:

- c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526) or timberland zoned Timberland Production (as defined by Government Code Section 51104 (g)).
- d. Result in the loss of forestland or conversion of forest land to non-forest use.
- f. Result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Section 15206(b)(3) Public Resources Code.

As detailed in the IS/NOP, none of the parcels included as part of the proposed project are subject to a Williamson Act Land Use contract, and implementation of the project would not result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Public Resources Code Section 15206(b)(3)). Therefore, the potential for conflicts with Williamson Act Land Use contract are not anticipated and are considered to have no impact. There is no land in the vicinity of the proposed project site that is zoned as forest land, timberland, or lands zoned for timberland production. Thus, there would be no impacts related to loss of forest land or timberland, or the conversion of forest land to non-forest use. Therefore, no further analysis of these impacts is warranted in this EIR.

Project Impacts

Impact 4.2-1: The project would not Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.

The project site is not located on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The site is not currently used for agricultural production. The California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) 2018 Important Farmland Map, designates APN 099-290-17 as “Urban and Development” and APN 099-261-32 as “Grazing Land” (DOC 2018). Therefore, because the project site is designated as “Urban and Development” and “Grazing Land” and the proposed project would not convert any existing designated farmland to a nonagricultural use, impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.2-2: The project would not conflict with existing zoning for agricultural use or Williamson Act Contract.

The project is not part of a Williamson Act Contract and development of the proposed project would not conflict with the surrounding agricultural zoning. Although the site is agriculturally zoned, the property has not been actively farmed. In addition, the potential for future farming activities is limited due to the basin groundwater adjudication status.

The entire 640-acre project site proposes a change in Zone District from A (Exclusive Agriculture) to M-3 (Heavy Industrial). As detailed in Sections 19.40.020 and 19.40.030, agricultural activities are allowed within the M-3 zone district. In addition, according to the County's Zoning Ordinance, hazardous waste facilities are allowed with a CUP in both the A zone district and M-3 zone district. Therefore, with approval of the modified CUP, the project would not conflict with the surrounding agricultural uses and impacts would be less than significant.

The site is bordered to the north by agricultural land, which historically has included pistachios and alfalfa, and to the west, south and east by oil production. None of the parcels included as part of the proposed project of the project are subject to a Williamson Act Land Use contract. There are several parcels under a Williamson Act contract located north and west of the project site. As shown on **Figure 4.2-3, *Williamson Act Lands***, the closest land under an active Williamson Act contract is located immediately adjacent to the northern boundary of APN 099-290-16 and is designated as "Prime Farmland." No other lands surrounding the project site are under active Williamson Act contracts or used for active agricultural uses.

The project site is currently included within Kern County Agricultural Preserve No. 2 boundary, as is the standard practice in Kern County for any land that is zoned A (Exclusive Agriculture). The permanent development of the project site, as allowed by the M-3 Zone District, would prohibit agricultural activities on the project site. Therefore, to ensure consistency with the M-3 Zone District, the project proposes to exclude the entire 640-acre site from Agricultural Preserve No. 2, as shown in **Figure 4.2-4, *Clean Harbors Proposed Agricultural Preserve Map***. The project would continue operation of existing uses and expand the existing the CUP boundary to include landfill buffer and construct additional project components. Given that none of the proposed modifications to the CUP deviate from the current operations that are adjacent to Williamson Act lands, no new impacts to surrounding lands would occur. Additionally, the proposed project does not include any components that would interfere with the Williamson Act contract of surrounding lands. Therefore, impacts resulting from conflicting with a Williamson Act contract would be less than significant and no mitigation is required.

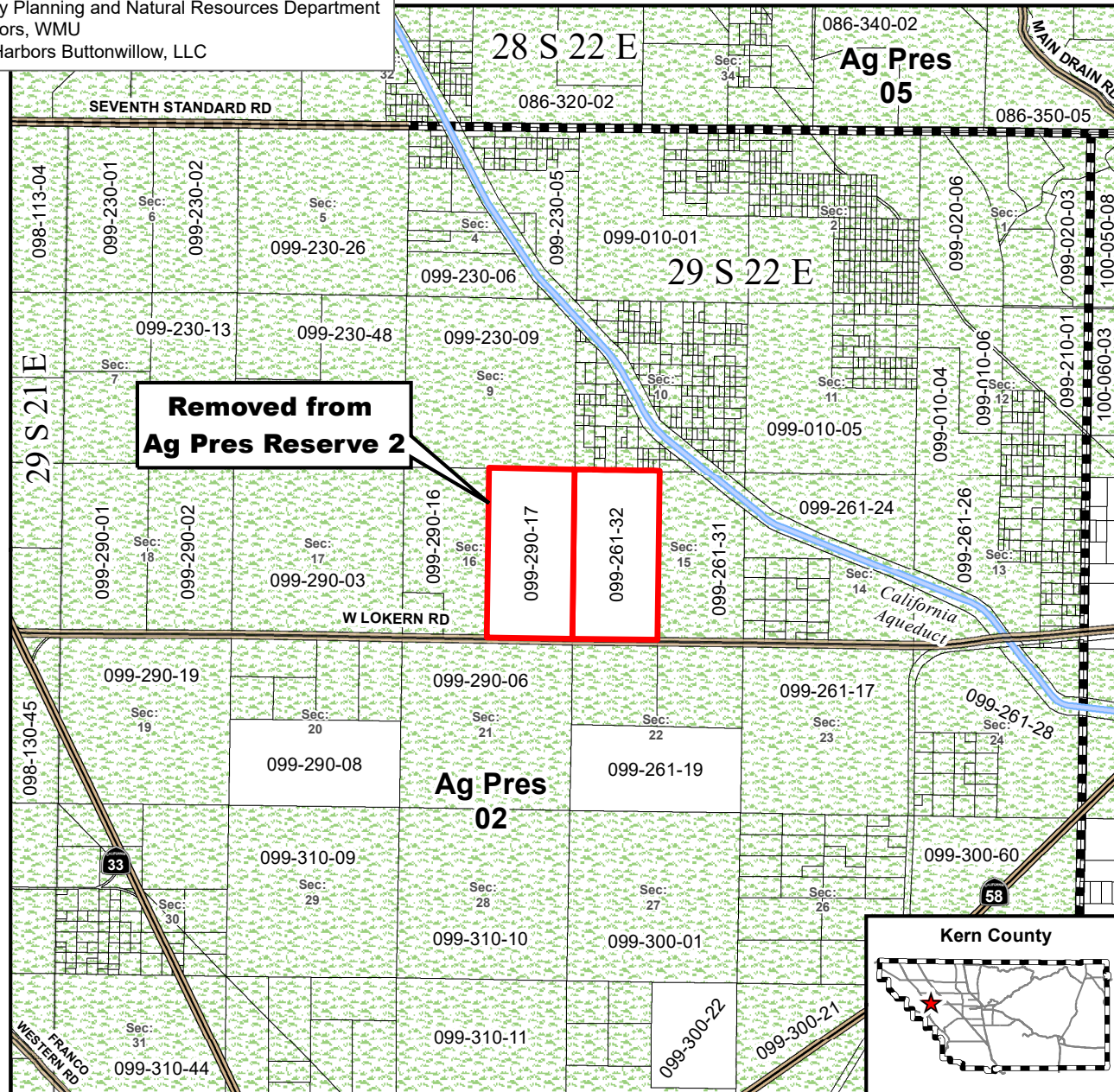
Mitigation Measures

No mitigation measures required.

Level of Significance

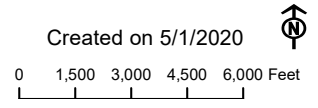
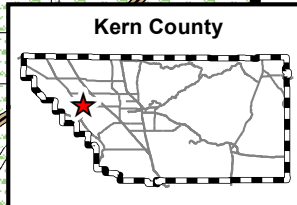
Impacts would be less than significant.

Kern County Planning and Natural Resources Department
 Clean Harbors, WMU
 By: Clean Harbors Buttonwillow, LLC



**Removed from
 Ag Pres Reserve 2**

- Site
- Ag Preserve Boundary
- Ag Preserve Included
- Highways
- Arterials
- 2020 Parcels
- Sections
- Water Courses



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Impact 4.2-3: The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural uses.

The permanent development of the project site, as allowed by the M-3 Zone District, would prohibit agricultural activities on the project site. Therefore, to ensure consistency with the M-3 Zone District, the project proposes to exclude the entire 640-acre site from Agricultural Preserve No. 2. No agricultural activities have occurred on either parcel within the last four years.

Regarding conversion of surrounding agricultural lands, the project would not induce the conversion of other nearby agricultural lands to non-agricultural uses. The change in zoning from A (Exclusive Agriculture) to M-3 (Heavy Industrial) is not anticipated to affect nearby growers' ability to farm and would not require additional restrictions and limitations on pesticides, fungicides, and herbicides used on the crops as the project does not include the addition of any sensitive receptors to the adjacent agriculture lands. In addition, the project is sited along major arterial streets and roadways. The existing 2000-foot buffer around the landfill Facility would be maintained (see **Figure 4.11-1, Existing Kern County General Plan Designations Map**). The proposed use would not substantially affect the agricultural character or production of the area. The removal of these properties from an agricultural zoning would not substantially affect the agricultural character of the area, and the conversion to non-agricultural uses that could potentially be caused by the project would be limited to the project site. The project would not introduce a non-agricultural use that is sensitive to or incompatible with the surrounding agricultural operations that would occur nearby.

The project would not involve any changes to the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

Mitigation Measures

No mitigation measures required.

Level of Significance

No Impact.

Cumulative Setting, Impacts, and Mitigation Measures

The geographic scope for cumulative impacts is Kern County as a whole. Kern County ranks high on the list of California counties with respect to urbanization and loss of farmland. As discussed in Section 4.2.2, the County had 874,026 acres of Important Farmland in 2018, down from 880,102 acres in 2016. Although, growth in population is likely to decrease the amount of agricultural land in Kern County in the future, other factors, including availability of water also contribute to decreases in farmland. Current conditions related to drought, water availability, and the economic impacts of water purchases may have resulted in some of the project sites being excluded from agriculture during previous years.

The proposed project would have less than significant impacts with regard to impacts to agricultural resources and would not make a cumulative contribution to the loss of farmland in the local vicinity within the western region of Kern County or the County as a whole. While there are other past, present, and future projects that have and would result in farmland conversion, the proposed project would not make a significant contribution to the overall loss. The proposed project is a compatible use that does not limit

agricultural activities such as pesticide spraying and crop dusting or create impacts such as dust or debris that would otherwise force agricultural activities from the area. As described above, the proposed project is not under existing agricultural production, is not designated as important farmland, is not under a Williamson Act Contract, and due to its location and immediately surrounding uses, would not preclude the use of any other area for agriculture. Therefore, the proposed project would not, taken in consideration of past, present and future projects, make a cumulative contribution to the loss of agricultural or forest land. Impacts would be less than significant in this regard.

Mitigation Measures

No mitigation measures required.

Level of Significance

Cumulative impacts would be less than significant.

4.3.1 Introduction

This section of the EIR describes the affected environment and regulatory setting of the project and evaluates the short- and long-term air quality impacts associated with development of the proposed Clean Harbors Buttonwillow WMU, Solid Waste Treatment, Storage, and Disposal Facility (project). Further, this analysis describes the affected environment and regulatory setting for air quality. Where necessary, mitigation measures are included to avoid or lessen the impacts of the proposed project.

Information in this section is based primarily on the *WMU 36, 37, & 38 Non-Hazardous Waste Disposal Landfill Project Air Quality Technical Report* (Air Quality Report), which was prepared by Ramboll, located in Appendix B of this EIR. The report was prepared in accordance with the Kern County Planning Department's *Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports* and the San Joaquin Valley Air Pollution Control District (SJVAPCD) *Guidance for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2015a). Additionally, information pertaining to potential health risk impacts resulting from the project's construction and operational activities is provided within the *Health Risk Assessment Technical Report* (HRA) also prepared by Ramboll and included in Appendix C of this EIR.

Several scoping comments were received in response to the Notice of Preparation regarding the potential of the project to affect air quality and potential human health risks. The SJVAPCD provided a scoping comment letter with recommendations for the EIR air quality analysis and describing the permit requirements for the proposed project. These comments are included in Appendix A of this EIR.

4.3.2 Environmental Setting

The California Air Resources Board (CARB) has divided California into regional air basins according to topographic drainage features. The project site is located within the jurisdictional boundaries of the San Joaquin Valley Air Basin (SJVAB) and is subject to the guidelines and regulations of the SJVAPCD.

The San Joaquin Valley floor is within the southern end of the SJVAB, which is made up of all or portions of eight counties in California's Central Valley. These counties are Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare Counties, as well as the San Joaquin Valley portion of Kern County. Air pollution in the SJVAB can be attributed to both human-related (anthropogenic) and natural (non-anthropogenic) activities that produce emissions. Air pollution from significant anthropogenic activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. Activities that tend to increase mobile activity include increases in population, increases in traffic (including automobiles, trucks, aircraft, and rail), urban sprawl (which increases commuter driving distances), and general local land management practices as they pertain to modes of commuter transportation. Air pollution is also transported into the SJVAB from a variety of sources, including northern California and Asia.

Topography and Meteorology

Air pollution, especially the dispersion of air pollutants, is directly related to a region's topographic features. Air quality is a function of both the rate and location of pollutant emissions and the meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, which affects ambient air quality.

The project site is located in central Kern County, approximately 8 miles west of the unincorporated community of Buttonwillow in central California. The project site is located approximately 25 miles west of the Bakersfield City limits (31 miles west of downtown Bakersfield), approximately 15 miles south of Lost Hills, approximately 7 miles north of McKittrick, and approximately 20 miles north of Taft. Two State highways (State Route [SR-] 33 and SR-58) are located 2.8 miles west and 3.5 miles east, respectively, from the project site. Interstate (I-) 5 is located approximately 11 miles east of the project site via Lokern Road and SR-58.

The 250-mile-long SJVAB is in the southern half of California's Central Valley and bordered by mountains on three sides. The SJVAB is bordered by the Sierra Nevada Mountains in the east (8,000 to 14,491 feet above mean sea level [msl] in elevation), the Coast Ranges in the west (averaging 3,000 feet above msl in elevation), and the Tehachapi Mountains in the south (6,000 to 7,981 feet above msl in elevation). There is a slight downward elevation gradient from Bakersfield in the southeast end (408 feet above msl in elevation) to sea level at the northwest end where the valley opens to the San Francisco Bay at the Carquinez Strait. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The bowl-shaped topography inhibits movement of pollutants out of the valley.

Subtropical high-pressure events are strongest during spring, summer, and fall and produce subsiding air, which can result in temperature inversions in the valley. Air temperature in the lowest layer of the atmosphere typically decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. The height of the base of the inversion is known as the "mixing height." This is the level to which pollutants can mix vertically. Mixing of air is minimized above the inversion base. The inversion base represents an abrupt density change where little air movement occurs. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass near the land surface, resulting in trapping of air pollutants below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500 to 3,000 feet). Concentration levels of air pollutants are directly related to inversion layers due to the limitation of vertical mixing. Inversion layers enhance the formation of ozone and limit dispersion of directly emitted pollutants like particulate matter and carbon monoxide.

Wintertime high-pressure events can often last many weeks, with surface temperature often lowering into the 30 degrees Fahrenheit (°F) range. During these events, fog can be present and inversions are extremely strong. These winter-time inversions can inhibit vertical mixing of pollutants to a few hundred feet.

The transport and dispersion of air pollutants in ambient air are influenced by many complex factors. The primary factors are wind, topographical boundaries, and atmospheric stability. During the summer, wind speed and direction data indicate that summer wind usually originates at the north end of the San Joaquin Valley and flows in a south-southeasterly direction through the valley and the Tehachapi Pass, into the Mojave Desert. During the winter months, the San Joaquin Valley experiences light, variable winds, less than 10 miles per hour (mph).

Wind Patterns

The SJVAB's topography has a dominating effect on wind patterns. Winds tend to blow somewhat parallel to the valley and mountain range orientation. In spring and early summer, thermal low-pressure systems develop over the interior basins east of the Sierra Nevada mountain range, and the Pacific High (a high-pressure system that develops over the central Pacific Ocean near the Hawaiian Islands) moves northward. These developments and the topography produce the high incidence of relatively strong northwesterly winds in the spring and early summer.

Diurnal wind regimes markedly affect the horizontal transport of air in the project area. During the summer, northeast winds dominate the daytime regime. These winds, generated by the Pacific High offshore, are enhanced by the San Joaquin Valley orientation and by the thermal low that develops in the Central Valley during this season. In response to this thermal low, air moves inland through passes in the coastal ranges, principally the Carquinez Strait near San Francisco, and flows to the south in the San Joaquin Valley as an up-valley northwesterly wind. This general northwest flow in the San Joaquin Valley is expressed locally as a more northeasterly wind under the influence of local terrain on the west side of the valley.

Dominant nighttime wind directions during summer are markedly different from daytime wind directions. Winds with a northerly component have a low frequency of occurrence at night. The high frequency of west to southwest winds at night is due primarily to down-slope drainage flow.

During the winter months, northerly to northeasterly winds remain dominant in the daytime. However, winds are more variable than during summer, due in part to: (1) the southward migration of the Pacific High and resultant storm passages; (2) the absence of a strong thermal trough; and (3) the varied influence of the Great Basin High. As in summer, winds during winter nights are predominantly from the west to southwest and are associated with drainage flow. Wind speeds are generally higher in summer than in winter in the project area. Calm conditions occur most often in winter but are relatively infrequent during either season.

The mountains to the east, south, and west essentially block the region from transport of very cold air from the mid-continent in winter, and the relatively cool, marine air from the Pacific Ocean during summer. Transport of marine air through the Carquinez Strait during summer has a moderating effect on northern portions of the San Joaquin Valley, but this effect is not great in the southern portion of the valley. In this area, temperature regimes are influenced primarily by topography, with the higher elevations generally experiencing cooler temperatures.

Climate

The overall climate in the SJVAB is warm and semi-arid. The San Joaquin Valley is in a Mediterranean Climate Zone. Mediterranean Climate Zones occur on the west coast of continents at 30 to 40 degrees latitude and are influenced by a subtropical high-pressure area most of the year. Mediterranean climates are characterized by sparse rainfall, which occurs mainly in the winter. There is only one wet season during the year and 90% of the precipitation falls during October through April. Snow in the valley is infrequent and thunderstorms seldom occur. Summers are hot and dry. Summertime maximum temperatures often exceed 100°F in the valley.

In winter, storm systems moving in from the Pacific Ocean bring a maritime influence to the San Joaquin Valley. The Sierra Nevada mountain range prevents the cold, continental air masses from influencing the valley. Temperatures below freezing are unusual. In the southern portion of the SJVAB, average high

temperatures in the winter are in the 60s, but highs in the 30s and 40s can occur with persistent fog and low cloudiness. In summer, high temperatures often exceed 100°F, with averages in the mid/high 90s in the southern SJVAB. Summer low temperatures average in the mid-50s in the southern basin.

Precipitation

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

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

Sensitive Receptors

The SJVAPCD identifies a sensitive receptor as a location 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, according to the averaging period for ambient air quality standards, such as 24-hour, 8-hour, or 1-hour. Examples of sensitive receptors include residences, hospitals, and schools (SJVAPCD 2015a). Industrial and commercial uses are not considered sensitive receptors.

For this analysis, all land uses other than commercial, agricultural, and industrial are considered sensitive receptors. Surrounding land uses are composed primarily of oil and gas production and agriculture. The area surrounding the Facility is zoned exclusively for agriculture and falls within Agricultural Preserve No. 2. Land use immediately adjacent to the Facility consists of irrigated agricultural to the north, a solar energy plant to the northeast, and completely undeveloped land to the south and west. Irrigated agriculture and oil production activities are the predominant land uses surrounding the Facility for several miles. Four private water wells are located off site, northeast of the Facility. The California Aqueduct is located off site approximately 0.5 miles northeast of the Facility's northern property line. The nearest populated areas are the unincorporated communities of Buttonwillow and Lost Hills, approximately 8 miles to the east and 16 miles to the north, respectively. The nearest residential area is located approximately 2.5 miles northeast of the project site. Buttonwillow Union Elementary School is located approximately 3 miles northeast of the project site and McKittrick Elementary School is located over 6 miles south of the site. The project site is located approximately 8 miles northwest of the nearest airport, the Elk Hills-Buttonwillow airport. The Taft-Kern County-L7 airport is located approximately 19 miles south of the project site.

Ambient Air Quality Standards

National Standards

Regulation of air pollution is achieved through both federal and state ambient air quality standards and permitted emission limits for individual sources of air pollutants. As required by the federal Clean Air Act (CAA), the United States Environmental Protection Agency (USEPA) has identified criteria pollutants and has 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 (PM) (specifically PM₁₀ and PM_{2.5}), and lead. These pollutants are called “criteria” air pollutants because standards have been established for each of them to meet specific public health and welfare criteria.

The following is a general description of the physical and health effects from the governmentally regulated air pollutants:

Ozone

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 10–30 miles and protects life on earth from the sun’s harmful ultraviolet rays.

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

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

Health Effects

While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular diseases, are aggravated by exposure to high ozone levels. Ozone also

damages natural ecosystems, such as forests and foothill communities; agricultural crops; and some 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 2020a). Active people, both children and adults, appear to be more at risk from ozone exposure than those with a low level of activity. In addition, the elderly and those with respiratory disease are also considered sensitive populations for ozone.

Ozone is a powerful oxidant—it can be compared to household bleach, which can kill living cells (such as germs or human skin cells) upon contact. Ozone can damage the respiratory tract, causing inflammation and irritation, and it can induce symptoms, such as coughing, chest tightness, shortness of breath, and worsening of asthmatic symptoms. Ozone in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. Exposure to levels of ozone above the current ambient air quality standard leads to lung inflammation, lung tissue damage, and a reduction in the amount of air inhaled into the lungs. Health effects include potential increased susceptibility to respiratory infections and reduced ability to exercise. Health effects are more severe in people with asthma and other respiratory ailments. People who work or play outdoors are at a greater risk for harmful health effects from ozone. Children and adolescents are also at greater risk because they are more likely than adults to spend time engaged in vigorous activities. Research indicates that children under 12 years of age spend nearly twice as much time outdoors daily than adults. Teenagers spend at least twice as much time as adults in active sports and outdoor activities. Also, children inhale more air per pound of body weight than adults, and they breathe more rapidly than adults. Children are less likely than adults to notice their own symptoms and avoid harmful exposures. Elevated ozone concentrations also reduce crop and timber yields, damage native plants, and damage materials such as rubber, paints, fabric, and plastics (CARB and ALAC 2007).

To protect human health and the environment, 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.

Particulate Matter (PM₁₀ and PM_{2.5})

Particulate matter pollution consists of very small liquid and solid particles floating in the air. Some particles are large and dark enough to be seen as soot or smoke. Others are so small they can be detected only with an electron microscope. Particulate matter is a mixture of materials that can include smoke, soot, dust, salt, acids, and metals. Particulate matter also forms when gases emitted from motor vehicles and industrial sources undergo chemical reactions in the atmosphere. PM₁₀ refers to particles less than or equal to 10 microns in aerodynamic diameter. PM_{2.5} refers to particles less than or equal to 2.5 microns in aerodynamic diameter and is a subset of PM₁₀. Particulate matter or airborne dusts are the small particles that remain suspended in the air for long periods of time. Particulates of concern are PM₁₀ and PM_{2.5}, which are small enough to be inhaled, pass through the respiratory system, and lodge in the lungs, possibly leading to adverse health effects.

The composition of PM₁₀ and PM_{2.5} can vary greatly with time, location, the sources of the material, and meteorological conditions. Dust, sand, salt spray, metallic and mineral particles, pollen, smoke, mist, and acid fumes are the main components of PM₁₀ and PM_{2.5}. In addition to those listed previously, secondary particles

can also be formed as precipitates from photochemical reactions of gaseous SO₂ and NO_x in the atmosphere to create sulfates (SO₄) and nitrates (NO₃), respectively. Secondary particles are of greatest concern during the winter months when low inversion layers tend to trap the precursors of secondary particulates.

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

Health Effects

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

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

A study conducted in 2006 provides evidence that exposure to particulate air pollution is associated with lung cancer. This study found that residents who live in an area that is severely affected by particulate air pollution are at risk of developing lung cancer at a rate comparable to nonsmokers exposed to secondhand smoke. This study also found approximately 16% excess risk of dying from lung cancer due to fine particulate air pollution (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 (Peters et al. 2001).

Attaining the California particulate matter standards would annually prevent about 6,500 premature deaths, or 3% of all deaths. These premature deaths shorten lives by an average of 14 years. This is roughly equivalent to the same number of deaths (4,200 to 7,400) linked to secondhand smoke in 2000. In

comparison, motor vehicle crashes caused 3,200 deaths, and 2,000 deaths resulted from homicide. Attaining the California particulate matter and ozone standards would annually prevent 4,000 hospital admissions for respiratory disease, 3,000 hospital admissions for cardiovascular disease, and 2,000 asthma-related emergency room visits. Exposure to diesel particulate matter (DPM) causes about 250 excess cancer cases per year in California.

Carbon Monoxide (CO)

CO is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. CO is an odorless, colorless, poisonous gas that is highly reactive. CO is a byproduct of motor vehicle exhaust, which contributes more than 66% of all CO emissions nationwide. In cities, automobile exhaust can cause as much as 95% of all CO emissions. These emissions can result in high concentrations of CO, particularly in local areas with heavy traffic congestion. Other sources of CO emissions include industrial processes and fuel combustion in sources such as boilers and incinerators. Despite an overall downward trend in concentrations and emissions of CO, some metropolitan areas still experience high levels of CO. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground-level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

Health Effects

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

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

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

Nitrogen Oxides (NO_x)

NO_x is a family of highly reactive gases that is a primary precursor to the formation of ground-level ozone and reacts in the atmosphere to form acid rain. NO_x is emitted from solvents and combustion processes in which fuel is burned at high temperatures, principally motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. A brownish gas, NO_x is a strong oxidizing agent that reacts in the

air to form corrosive nitric acid as well as toxic organic nitrates. NO_x is also an ozone precursor that combines with ROG to form ozone (see discussion above for the health effects of ozone).

Health Effects

NO_x is an ozone precursor that combines with ROG to form ozone. See the ozone section above for a discussion of the health effects of ozone. Direct inhalation of NO_x can also cause a wide range of health effects. NO_x can irritate the lungs, cause lung damage, and lower resistance to respiratory infections such as influenza. Short-term exposures (e.g., less than 3 hours) to low levels of nitrogen dioxide (NO_2) 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 NO_2 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 (CAPCOA 2016).

Sulfur Dioxide (SO_2)

Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (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.

SO_2 is a colorless, irritating gas with a “rotten egg” smell that is formed primarily by the combustion of sulfur-containing fossil fuels. Historically, SO_2 was a pollutant of concern in Kern County, but with the successful implementation of regulations, the levels have been reduced significantly.

Health Effects

High concentrations of SO_2 can result in temporary breathing impairment for asthmatic children and adults who are active outdoors. Short-term exposures of individuals to elevated SO_2 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 SO_2 , in conjunction with high levels of particulate matter, include aggravation of existing

cardiovascular disease, respiratory illness, and alterations in the lungs' defenses. SO₂ also is a major precursor to PM_{2.5}, which is a significant health concern and a main contributor to poor visibility (see also the discussion of health effects of particulate matter).

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

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

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

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

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

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

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

Lead (Pb)

Lead (Pb) is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Historically, lead was used to increase the

octane rating in automobile fuel. However, because the use of gasoline-powered automobile engines run on leaded fuels, a major source of airborne lead, has been mostly phased out, the ambient concentrations of lead have dropped dramatically.

Health Effects

Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ. Recent studies also show that lead may be a factor in high blood pressure and subsequent heart disease. Lead can also be deposited on the leaves of plants, presenting a hazard to grazing animals and humans through ingestion (USEPA 2021).

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

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

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

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

State Standards

California has generally adopted more stringent ambient air quality standards for the criteria air pollutants (i.e., California Ambient Air Quality Standards [CAAQS]). California has also established CAAQS for sulfates, hydrogen sulfide, and vinyl chloride; however, air emissions of these pollutants are not expected to occur under the project. These pollutants are described below for information purposes, but are not addressed in the impact analysis of this document.

Sulfates (SO₄⁻²)

Sulfates (SO₄⁻²) are particulate product that comes from the combustion of sulfur-containing fossil fuels. When sulfur monoxide (SO) or SO₂ is exposed to oxygen, it precipitates out into sulfates (SO₃ or SO₄). Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO₂ during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The

conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California because of regional meteorological features.

Health Effects

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

Hydrogen Sulfide (H₂S)

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

Health Effects

Exposure to low concentrations of H₂S may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Exposure to higher concentrations (above 100 ppm) can cause olfactory fatigue, respiratory paralysis, and death. Brief exposures to high concentrations of H₂S (greater than 500 ppm) can cause a loss of consciousness. In most cases, the person appears to regain consciousness without any other effects. However, in many individuals, there may be permanent or long-term effects such as headaches, poor attention span, poor memory, and poor motor function. No health effects have been found in humans exposed to typical environmental concentrations of H₂S (0.00011–0.00033 ppm). Deaths due to breathing in large amounts of H₂S have been reported in a variety of different work settings, including sewers, animal processing plants, waste dumps, sludge plants, oil and gas well drilling sites, and tanks and cesspools.

Vinyl Chloride

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

Health Effects

In humans, epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of liver angiosarcoma, which is a rare cancer, and have suggested a relationship between exposure cancers of the lung and brain. There are currently no adopted ambient air standards for vinyl chloride.

Short-term exposure to vinyl chloride has been linked with the following acute health effects (USEPA 2000):

- Acute exposure of humans to high levels of vinyl chloride through inhalation has resulted in effects on the central nervous system, such as dizziness, drowsiness, headaches, and giddiness.
- Vinyl chloride is reported to be slightly irritating to the eyes and respiratory tract in humans. Acute exposure to extremely high levels of vinyl chloride has caused loss of consciousness; irritation to the lungs and kidneys; inhibition of blood clotting in humans; and cardiac arrhythmias in animals.
- Tests involving acute exposure of mice to vinyl chloride have shown high acute toxicity from inhalation exposure to the substance.

Long-term exposure to vinyl chloride concentrations has been linked with the following chronic health effects (USEPA 2000):

- Liver damage may result in humans from chronic exposure to vinyl chloride, through both inhalation and oral exposure.
- A small percentage of individuals occupationally exposed to high levels of vinyl chloride in air have developed a set of symptoms termed “vinyl chloride disease,” which is characterized by Raynaud’s phenomenon (fingers blanch and numbness and discomfort are experienced upon exposure to the cold), changes in the bones at the end of the fingers, joint and muscle pain, and scleroderma-like skin changes (thickening of the skin, decreased elasticity, and slight edema).
- Central nervous system effects (including dizziness, drowsiness, fatigue, headache, visual and/or hearing disturbances, memory loss, and sleep disturbances) as well as peripheral nervous system symptoms (peripheral neuropathy, tingling, numbness, weakness, and pain in fingers) have also been reported in workers exposed to vinyl chloride.

Several reproductive/developmental health effects from vinyl chloride exposure have been identified (USEPA 2000):

- Several case reports suggest that male sexual performance may be affected by vinyl chloride. However, these studies are limited by lack of quantitative exposure information and possible co-occurring exposure to other chemicals.
- Several epidemiological studies have reported an association between vinyl chloride exposure in pregnant women and an increased incidence of birth defects, while other studies have not reported similar findings.
- Epidemiological studies have suggested an association between men occupationally exposed to vinyl chloride and miscarriages during their wives’ pregnancies, although other studies have not supported these findings.
- Long-term exposure to vinyl chloride has also been identified as a cancer risk. Inhaled vinyl chloride has been shown to increase the risk of a rare form of liver cancer (angiosarcoma of the liver) in humans. Animal studies have shown that vinyl chloride, via inhalation, increases the incidence of angiosarcoma of the liver and cancer of the liver.

Existing Attainment Status

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

Existing and probable future air quality in the project area can best be inferred from examining ambient air quality measurements taken at monitoring stations in the vicinity of the project area. The primary pollutants of concern in the project area are ozone, PM₁₀, and PM_{2.5} because the San Joaquin Valley is designated nonattainment for these pollutants by the USEPA and/or CARB. Ten ambient air monitoring stations operate in Kern County, eight of which are in the valley portion of Kern County and two of which are in the desert portion of Kern County. The monitoring stations closest to the project site are Shafter at Walker Street, Bakersfield at California Avenue, and Bakersfield at South Union Avenue. SO₂ is not monitored in Kern County; the nearest station is in Fresno.

Table 4.3-1, Local Ambient Air Quality Data Summary (2017–2019), shows the monitoring results for the criteria pollutants for the past 3 years from these air quality monitoring stations.

TABLE 4.3-1: LOCAL AMBIENT AIR QUALITY DATA SUMMARY (2017–2019)

Pollutant	Monitoring Year			Monitoring Station
	2017	2018	2019	
Ozone (O₃)				
1 Hour	0.094 ppm	0.098 ppm	0.087 ppm	Shafter – Walker Street
8 Hour	0.082 ppm	0.090 ppm	0.077 ppm	
Respirable Particulate Matter (PM₁₀)				
24 Hour	143.6 µg/m ³	142.0 µg/m ³	125.9 µg/m ³	Bakersfield – California Avenue
Annual	42.6 µg/m ³	NA	39.0 µg/m ³	
Fine Particulate Matter (PM_{2.5})				
24 Hour	101.8 µg/m ³	98.5 µg/m ³	59.1 µg/m ³	Bakersfield – California Avenue
Annual	15.9 µg/m ³	17.6 µg/m ³	11.8 µg/m ³	
Sulfur Dioxide (SO₂)				
1 Hour	7.7 ppb	7.2 ppb	8.9 ppb	Fresno – First Street
24 Hour	2.3 ppb	2.6 ppb	2.1 ppb	
Nitrogen Dioxide (NO₂)				
1 Hour	48 ppb	48 ppb	49 ppb	Shafter – Walker Street
8 Hour	8.88 ppb	9.59 ppb	8.57 ppb	

TABLE 4.3-1: LOCAL AMBIENT AIR QUALITY DATA SUMMARY (2017–2019)

Pollutant	Monitoring Year			Monitoring Station
	2017	2018	2019	
Carbon Monoxide (CO)				
1 Hour	1.8 ppb	1.9 ppb	1.2 ppb	Bakersfield – South Union Avenue
8 Hour	1.2 ppb	1.3 ppb	1.0 ppb	

Source: Appendix B.

Note: NA = not applicable.

Table 4.3-2, National and State Criteria Pollutant Standards and Eastern Kern Air Pollution Control District Attainment Status, 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 SJVAPCD 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 4.3-2: NATIONAL AND STATE CRITERIA POLLUTANT STANDARDS AND SJVAPCD ATTAINMENT STATUS

Pollutant	Averaging Time	California Standards ¹	National Standards ²		SJVAPCD Attainment Status	SJVAPCD Attainment Status
		Concentration ³	Primary ^{3,4}	Secondary ^{3,5}		
Ozone (O ₃) ⁶	1 Hour	0.09 ppm (180 µg/m ³)	Nonattainment/ Severe	-	Same as Primary Standard	No Federal Standard ⁷
	8 Hour	0.070 ppm (137 µg/m ³)	Nonattainment	0.070 ppm (137 µg/m ³)	Same as Primary Standard	Nonattainment/ Extreme ⁸
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Nonattainment	150 µg/m ³	Same as Primary Standard	Attainment ¹⁰
	Annual Arithmetic Mean	20 µg/m ³	Nonattainment	-	Same as Primary Standard	Attainment ¹⁰
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	-	Nonattainment	35 µg/m ³	Same as Primary Standard	Nonattainment ¹¹
	Annual Arithmetic Mean	12 µg/m ³	Nonattainment	12.0 µg/m ³	15.0 µg/m ³	Nonattainment ¹¹
	1 Hour	20 ppm (23 mg/m ³)	Attainment/ Unclassified	35 ppm (40 mg/m ³)	-	Attainment/ Unclassified

TABLE 4.3-2: NATIONAL AND STATE CRITERIA POLLUTANT STANDARDS AND SJVAPCD ATTAINMENT STATUS

Pollutant	Averaging Time	California Standards ¹		National Standards ²		SJVAPCD Attainment Status
		Concentration ³	SJVAPCD Attainment Status	Primary ^{3,4}	Secondary ^{3,5}	
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m ³)	Attainment/ Unclassified	9 ppm (10 mg/m ³)	-	Attainment/ Unclassified
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)	Attainment/ Unclassified	-	-	Attainment/ Unclassified
Nitrogen Dioxide (NO ₂) ¹²	1 Hour	0.18 ppm (339 µg/m ³)	Attainment	100 ppb (188 µg/m ³)	-	Attainment/ Unclassified
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Attainment	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Attainment/ Unclassified
Sulfur Dioxide (SO ₂) ¹³	1 Hour	0.25 ppm (655 µg/m ³)	Attainment	75 ppb (196 µg/m ³)	-	Attainment/ Unclassified
	3 Hour	-	Attainment	-	0.5 ppm (1300 µg/m ³)	Attainment/ Unclassified
	24 Hour	0.04 ppm (105 µg/m ³)	Attainment	0.14 ppm (for certain areas) ¹³	-	Attainment/ Unclassified
	Annual Arithmetic Mean	-	Attainment	0.030 ppm (for certain areas) ¹³	-	Attainment/ Unclassified
Lead (Pb) ^{14,15}	30 Day Average	1.5 µg/m ³	Attainment	NA	NA	No Designation/ Classification
	Calendar Quarter	-	Attainment	1.5 µg/m ³ (for certain areas) ¹⁴	Same as Primary Standard	No Designation/ Classification
	Rolling 3-Month Average	-	Attainment	0.15 µg/m ³	Same as Primary Standard	No Designation/ Classification
Visibility Reducing Particles ¹⁶	8 Hour	See footnote 16	Unclassified	No Federal Standards	No Federal Standards	No Federal Standards
Sulfates	24 Hour	25 µg/m ³	Attainment	No Federal Standards	No Federal Standards	No Federal Standards
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Unclassified	No Federal Standards	No Federal Standards	No Federal Standards
Vinyl Chloride ¹⁴	24 Hour	0.01 ppm (26 µg/m ³)	Attainment	No Federal Standards	No Federal Standards	No Federal Standards

Note: NA = not applicable.

¹ California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All

others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

- 2 National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
- 3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- 4 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- 5 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- 6 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- 7 Effective June 15, 2005, the EPA revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
- 8 Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
- 9 On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- 10 On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM₁₀NAAQS and approved the PM₁₀Maintenance Plan
- 11 The Valley is designated nonattainment for the 1997 PM_{2.5} NAAQS. EPA designated the Valley as nonattainment for the 2006 PM_{2.5} NAAQS on November 13, 2009 (effective December 14, 2009).
- 12 To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- 13 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.
- 14 The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- 15 The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. 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.
- 16 In 1989, the ARB converted both the general statewide 10-mile visibility standard 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: Appendix B.

As shown in Table 4.3-2, the SJVAPCD is currently classified as nonattainment/severe for the 1-hour State ozone standard as well as nonattainment and nonattainment/extreme for the National and State 8-hour ozone

standards, respectively. Additionally, the SJVAPCD is classified as nonattainment for the State 24-hour PM₁₀ standard and the Federal and State PM_{2.5} standards. The SJVAPCD is currently in attainment and/or unclassified status for all other ambient air quality standards.

As indicated in **Table 4.3-3, Frequency of Air Quality Standard Violations (2017-2019)**, there have been numerous exceedances of the ozone, PM₁₀, and PM_{2.5} standards recorded at nearby monitoring sites during the 3-year study period.

TABLE 4.3-3: FREQUENCY OF AIR QUALITY STANDARD VIOLATIONS (2017-2019)

Monitoring Site	Year	Number of Days Exceeding Standard ¹					
		National 24-Hour PM ₁₀	State 24-Hour PM ₁₀	National 24-Hour PM _{2.5}	National 8-Hour O ₃	State 1-Hour O ₃	State 8-Hour O ₃
Shafter – Walker Street (O ₃);	2017	0	99	30	27	0	30
Bakersfield – California Avenue (PM ₁₀ , PM _{2.5})	2018	0	-	40	33	4	35
	2019	0	108	12	14	0	15

¹ Daily exceedances for particulate matter are estimated days because PM₁₀ and PM_{2.5} are not monitored daily.

Source: Appendix B

Other Pollutants

Toxic Air Contaminants

Toxic air contaminants (TACs), as known under the California Clean Air Act of 1988 (CCAA), are pollutants that have been identified through ambient air quality data as posing the most substantial health risk in California. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to brain and nervous system and respiratory disorders. CARB provides TAC emission inventories for only the larger air basins.

Sources include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners and motor vehicle exhaust. TACs do not have ambient air quality standards. Since no safe levels of TACs can be determined, there are no air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The requirements of the Air Toxic “Hot Spots” Information and Assessment Act apply to facilities that use, produce, or emit toxic chemicals. Facilities that are subject to the toxic emission inventory requirements of the Act must prepare and submit toxic emission inventory plans and reports to CARB and periodically update those reports.

TACs include DPM, asbestos, inorganic lead, and vinyl chloride, among others not expected to occur from the proposed project. Lead and vinyl chloride are described under the National Standards and State Standards headings above while DPM and asbestos are described below.

Diesel Particulate Matter

DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled engines contribute approximately 24 percent of the statewide total, with an additional 71 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about 5 percent 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). CARB estimates that approximately 70 percent of the cancer risk that the average Californian faces from breathing TACs stems from diesel exhaust particles.

In its comprehensive assessment of diesel exhaust, 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 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, have calculated similar cancer risks from diesel exhaust as those calculated by 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 (OEHHA and ALA 2001).

Asbestos

Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. In addition, 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 for development projects, and at quarry operations. Serpentinite 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. 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 (DOC 2000).

Airborne Fungus (Valley Fever)

Coccidioidomycosis, commonly referred to as San Joaquin Valley Fever or Valley Fever, is one of the most studied and oldest known fungal infections. Valley Fever most commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI). CI spores are found in the top few inches of soil and the existence of the fungus in most soil areas is temporary. The cocci fungus lives as a saprophyte in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus “blooms” and forms many tiny spores that lie dormant in the soil until they are stirred up by wind, vehicles, excavation, or other ground-moving activities and become airborne. Agricultural workers, construction workers, and other people who work outdoors and who are exposed to wind and dust are more likely to contract Valley Fever. Children and adults whose hobbies or sports activities expose them to wind and dust are also more likely to contract Valley Fever. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Approximately 60% of Valley Fever cases are mild and display flu-like symptoms or no symptoms at all. Of those who are exposed and seek medical treatment, the most common symptoms include fatigue, cough, loss of appetite, rash, headache, and joint aches. In some cases, painful red bumps may develop on the skin.

One important fact to mention is that these symptoms are not unique to Valley Fever and may be caused by other illnesses as well. Identifying and confirming this disease require specific laboratory tests such as: (1) microscopic identification of the fungal spherules in infected tissue, sputum, or body fluid sample; (2) growing a culture of CI from a tissue specimen, sputum, or body fluid; (3) detection of antibodies (serological tests specifically for Valley Fever) against the fungus in blood serum or other body fluids; and (4) administering the Valley Fever Skin Test (called coccidioidin or spherulin), which indicates prior exposure to the fungus (VFCE 2019a). It should be noted that the portion of Kern County that resides within the SJVAB has the highest incident rate for Valley Fever within California.

Valley Fever is not contagious and therefore cannot be passed on from person to person. Most of those who are infected would recover without treatment within 6 months and would have a life-long immunity to the fungal spores. In severe cases, especially in those patients with rapid and extensive primary illness, those who are at risk for dissemination of disease, and those who have disseminated disease, antifungal drug therapy is used. The type of medication used and the duration of drug therapy are determined by the severity of disease and response to the therapy. The medications used include ketoconazole, itraconazole, and fluconazole in chronic, mild-to-moderate disease, and amphotericin B, given intravenously or inserted into the spinal fluid, for rapidly progressive disease. Although these treatments are often helpful, evidence of disease may persist, and years of treatment may be required (VFCE 2019a).

Table 4.3-4, *Range of Valley Fever Cases*, presents the range of Valley Fever cases based on research conducted by the Valley Fever Center for Excellence.

TABLE 4.3-4: RANGE OF COMPLICATIONS OF VALLEY FEVER CASES

Infection Classification	Percent of Total Diagnosed Cases
Unapparent infections	60 percent
Mild to moderate infections	30 percent

TABLE 4.3-4: RANGE OF COMPLICATIONS OF VALLEY FEVER CASES

Infection Classification	Percent of Total Diagnosed Cases
Infections resulting in complications	5–10 percent
Fatal infections	<1 percent

Source: VFCE 2019b

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.

Visibility-Reducing Particles

This standard is a measure of visibility. The CARB does not yet have a measurement method that is accurate or precise enough to designate areas in the State as being in attainment or nonattainment. Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. Except for Lake County (which is designated to be in attainment), California’s attainment status with respect to visibility-reducing particles is currently designated as unclassified.

Odors

Typically, odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person’s reaction to foul odors can range from the psychological (i.e., irritation, anger, or anxiety) to the physiological (e.g., circulatory and respiratory effects, nausea, vomiting, headache). The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor and in fact an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the

odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Neither the state nor the Federal governments have adopted rules or regulations for the control of odor sources. The SJVAPCD does not have an individual rule or regulation that specifically addresses odors; however, odors would be subject to SJVAPCD's Rule 4102, Nuisance. Any actions related to odors would be based on citizen complaints to local governments and the SJVAPCD.

4.3.3 Regulatory Setting

In California, air quality is regulated by several agencies, including the USEPA, the CARB, and local air districts such as the SJVAPCD. Each of these agencies develops rules and/or regulations to attain the goals or directives imposed upon them through legislation. Although USEPA regulations may not be superseded, some State and local regulations may be more stringent than Federal regulations. The project site is located within the SJVAB, which is under the jurisdiction of the SJVAPCD.

Federal

U.S. Environmental Protection Agency (EPA)

The principal air quality regulatory mechanism on the federal level is the CAA and in particular, the 1990 amendments to the CAA, and the NAAQS that it establishes. These standards identify levels of air quality for "criteria" pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The criteria pollutants include ozone, CO, NO₂ (which is a form of NO_x), SO₂ (which is a form of SO_x), PM₁₀, PM_{2.5}, and lead. USEPA also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf), and those that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking. USEPA's primary role at the state level is to oversee the state air quality programs. USEPA sets federal vehicle and stationary source emission standards and oversees approval of all State Implementation Plans (SIP), as well as providing research and guidance in air pollution programs. The SIP is a state-level document that identifies all air pollution control programs within California that are designed to meet the NAAQS.

State

California Air Resources Board (CARB)

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. CARB 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 generally more stringent than the national standards in most cases, although recently promulgated NAAQS for 1-hour NO₂ and SO₂ can in some instances be more stringent than the respective CAAQS.

CARB is also responsible for regulations pertaining to TACs. The Air Toxics “Hot Spots” Information and Assessment Act (Assembly Bill [AB] 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release into their local air basin. Each air pollution control district and air quality management district (AQMD) in the state 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 air district.

CARB also has on- and off-road engine emission-reduction programs that would indirectly affect the project’s emissions through the phasing in of cleaner on- and off-road engines. Additionally, CARB has a Portable Equipment Registration Program that allows owners or operators of portable engines and associated equipment to register their units under a statewide program to operate their equipment which must meet specified program emission requirements, throughout California without having to obtain individual permits from local air districts. Since the project is not proposing to install any applicable stationary sources, the AB 2588 program would not apply to the project.

In 2007, CARB enacted a regulation for the reduction of DPM and criteria pollutant emissions from in-use off-road diesel-fueled vehicles (13 CCR Article 4.8, Chapter 9, Section 2449). This regulation provides target emission rates for particulate matter and NO_x emissions for owners of fleets of diesel-fueled off-road vehicles. It applies to equipment fleets of three specific sizes, and the target emission rates are reduced over time with full implementation by 2023 for large and medium fleets and 2028 for small fleets.

Title V and Extreme Designation

Title V of the CAA, as amended in 1990, creates an operating permit program for certain defined sources. In general, owner/operators of defined industrial or commercial sources that emit more than 25 tons per year (tpy) of NO_x and ROG must process a Title V permit. In “Extreme Designation” areas, the definition of a major source which requires Title V permitting, changes from 25 tpy to 10 tpy. This change results in more businesses having to comply with Title V permitting requirements under the Extreme nonattainment designation.

Title V does not impose any new air pollution standards, require installation of any new controls on the affected facilities, or require reductions in emissions. Title V does enhance public and EPA participation in the permitting process and requires additional record keeping and reporting by businesses, which results in significant administrative requirements.

California Renewables Portfolio Standard Program

Established in 2002 under SB 1078 and accelerated by SB 107 [2006] and SB 2 [2011], California’s Renewable Portfolio Standard (RPS) obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33 percent of their electricity from renewable energy sources by

2020. In 2015, SB 350 further increased the Renewables Portfolio Standard to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. In 2018, SB 100 accelerated and increased the RPS to 60 percent by 2030 and established a goal for 100 percent of the State's electricity to come from renewable and carbon-free resources by 2045.

The California Public Utilities Commission (CPUC) and the California Energy Commission are jointly responsible for implementing the program. Southern California Edison (SCE), which serves the project area, reported a 36 percent renewable energy procurement for 2021, meeting the 2021 annual RPS percentage target of 35.75 percent (CPUC 2022).

California Health and Safety Code Section 41700

This section of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air 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 any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Local

Kern County General Plan

The goals, policies, and implementation measures in the Kern County General Plan applicable to air quality, as related to the project, are 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, Conservation, and Open Space Element

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:

- (1) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
- (2) The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence

to the extent that such a statement is required pursuant to the California Environmental Quality Act.

Policy 20: The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District on ministerial permits.

Policy 21: The County shall support air districts efforts to reduce PM₁₀ and PM_{2.5} emissions.

Policy 22: Kern County shall continue to work with the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District toward air quality attainment with federal, State, and local standards.

Implementation Measures

Measure F: All discretionary permits shall be referred to the appropriate air district for review and comment.

Measure G: Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:

1. Minimizing idling time.
2. Electrical overnight plug-ins.

Measure H: Discretionary projects may use one or more of the following to reduce air quality effects:

1. Pave dirt roads within the development.
2. Pave outside storage areas.
3. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
4. Use of alternative fuel fleet vehicles or hybrid vehicles.
5. Use of emission control devices on diesel equipment.
6. Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces.
7. Provide bicycle lockers and shower facilities on site
8. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
9. The use and development of park and ride facilities in outlying areas.
10. Other strategies that may be recommended by the local Air Pollution Control Districts.

Measure J: The County should include PM₁₀ control measures as conditions of approval for subdivision maps, site plans, and grading permits.

Chapter 5. Energy Element

Solar Energy Development

Policies

Policy 1: The County shall encourage domestic and commercial solar energy uses to conserve fossil fuels and improve air quality.

San Joaquin Valley Air Pollution Control District

District Plans

The SJVAPCD is responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SJVAB. The SJVAPCD's air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control methods have worked, and to show how air pollution will be reduced. The plans also use computer modeling to estimate future levels of pollution and to demonstrate that the Valley will meet air quality goals. The most recent plans are summarized below.

2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards

In November 2018, SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards. This plan addresses the USEPA federal 1997 annual PM_{2.5} standard and 24-hour PM_{2.5} standard; the 2006 24-hour PM_{2.5} standard; and the 2012 annual PM_{2.5} standard. In the report, SJVAPCD included mobile source measures and a comprehensive suite of fiscally responsible local measures for stationary and area sources, including measures to further reduce emissions from industrial sources, residential wood burning and commercial charbroiling.

2016 Plan for the 2008 8-Hour Ozone Standard

In June 2016, SJVAPCD adopted the 2016 Plan for the 2008 8-hour Ozone Standard. Through the comprehensive stationary and mobile source control strategies that previously have been adopted and that are now proposed in this plan, NO_x emissions in the SJVAB are

expected to be reduced by over 60% between 2012 and 2031. As a result, the ambient ozone concentrations are projected to decrease dramatically in all areas of the Valley, such that future 8-hour ozone concentrations are expected to demonstrate attainment.

District Rules and Regulations

As stated earlier, the SJVAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SJVAB. The following rules and regulations apply to all sources in the jurisdiction of SJVAPCD:

Regulation II: Permits

Regulation II (Rules 2010-2550) contains a series of rules covering permitting requirements within the SJVAB. SJVAPCD regulations require any person constructing, altering, replacing or operating any source which emits, may emit, or may reduce emissions to obtain an Authority to Construct or a Permit to Operate.

Regulation VIII: Fugitive PM₁₀ Prohibitions

Regulation VIII (Rules 8011-8081) contains a series of rules designed to reduce PM₁₀ emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, etc. If a construction project is 10 or more acres in area or will include moving, depositing or relocating more than 2,500 cubic yards (CY) per day of bulk materials on at least three days, then a Dust Control Plan must be submitted as specified in Section 6.3.1 of Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities). Construction activities shall not commence until the District has approved the Dust Control Plan. The project may also be subject to additional provisions within Rule 8021, as well as Rule 8031 (Bulk Materials), Rule 8041 (Carryout and Track Out), Rule 8051 (Open Areas), Rule 8061 (Paved and Unpaved Roads), and Rule 8071 (Unpaved Vehicle/Equipment Traffic Areas). For example, Rule 8061 places thresholds and requirements on limiting Visible Dust Emissions from unpaved road segments to 20% opacity.

Rule 3135: Dust Control Plan Fee

This rule requires the applicant to submit a fee in addition to a Dust Control Plan. The purpose of this fee is to recover the SJVAPCD's cost for reviewing these plans and conducting compliance inspections.

Rule 4102: Nuisance

This rule applies to any source operation that emits or may emit air contaminants or other materials. In the event that the project or construction of the project creates a public nuisance, it could be in violation and be subject to SJVAPCD enforcement action.

Rule 4601: Architectural Coating

This rule limits VOC content in architectural coatings. This rule also contains requirements for architectural coatings storage, clean up and labeling.

Rule 4641: Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations

Rule 4641 applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations. Asphalt paving operations associated with the project will be subject to Rule 4641.

Rule 9510: Indirect Source Rule

This rule requires the applicants of certain development projects which equal or exceed established applicability thresholds to apply to the SJVAPCD when applying for the development's last discretionary

approval. Projects subject to the rule are required to quantify indirect emissions (mobile source emissions), area source emissions and construction exhaust emissions and to mitigate a portion of these emissions. The Indirect Source Rule was adopted December 2005 and last amended December 2017. Rule 9510 was adopted to reduce the impacts of growth in emissions from all new development in the San Joaquin Valley. Developers of projects subject to Rule 9510 must reduce emissions occurring during construction and operational phases through on-site measures or pay off-site mitigation fees. One hundred percent of all off-site mitigation fees are used by the District to fund emission reduction projects through its Incentives Programs, achieving emission reductions on behalf of the project. The emission reductions expected from the rule allow the SJVAPCD to achieve attainment of the federal air quality standards for ozone by 2031.

Stationary Source Permitting

The SJVAPCD also has an extensive stationary source permitting program that includes New Source Review Rules, which are in the approved SIP. These rules require offsets of emissions of ozone and particulates precursors at a ratio of greater than one to one, when ten tons and fifteen tons are exceeded, respectively. The rules also require that each new stationary source, which exceeds two pounds per day of pollutants, shall install Best Available Control Technology.

4.3.4 Impacts and Mitigation Measures

This section describes the impact analysis relating to air quality 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. Where warranted, measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Methodology

This section describes the methodology used in the Air Quality Report (Appendix B) to develop the criteria air pollutant emission inventories associated with the project, which include one-time emissions associated with construction of the project, and annual emissions associated with operation of the project. Baseline operational emissions are quantified for 2018, while emissions due to operation of the project are quantified for the first year of operations (i.e., 2022). This is a conservative assumption for on-road and off-road mobile sources as vehicular emissions are expected to decrease in future years due to anticipated Statewide improvements and fleet turnover to newer equipment and vehicles. Sub-categories of operational emissions include the following: on-site stationary sources, waste processing activities, fugitive emissions from Waste Management Units (WMUs), off-road equipment usage, building area sources and mobile sources.

Table 4.3-5, *Baseline and Project Sources*, summarizes the permitted and non-permitted sources for the baseline and project.

TABLE 4.3-5: BASELINE AND PROJECT SOURCES

Source	Baseline	New Sources in Project
Permitted¹		
STU Bays 1-4	X	
Silos 1-2	X	

TABLE 4.3-5: BASELINE AND PROJECT SOURCES

Source	Baseline	New Sources in Project
Wastewater Storage Tank	X	
Auger Shredder	X	
Gasoline Dispensing	X	
Emergency Generator	X	
Waste Management Unit (WMU) 35	X	
Fire Pump Engine	X	
Container Storage Area (CSA) ²	X	
Non-hazardous WMUs 36, 37, and 38		X
Tank Treatment Buildings (TTBs) 1-4, and associated baghouses		X
Unloading Bays 1-4		X
Non-Permitted¹		
Mobile on-road (employee, vendor vehicles, waste trucks)	X	X
Existing Building Architectural Coating and Consumer Product Use	X	
Laboratory Solvent Usage	X	
Operational Off-road Equipment	X	X
Paint Recycling Building Architectural Coating and Consumer Product Use		X

¹ The sources are separated into permitted and non-permitted sources in order to assess against SJVAPCD thresholds.

² The CSA is separately permitted through a current CSA permit application.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment

Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Resources

A description of resources used in the Air Quality Report to analyze project emissions is included below. For more details, please see Appendix B.

California Emission Estimator Model®

Ramboll primarily utilized the California Emissions Estimator Model (CalEEMod®) version 2016.3.2 methodology to assist in quantifying the criteria air pollutant emissions in the inventories presented in this report for the proposed project. CalEEMod® provides methodologies to calculate both construction emissions and operational emissions from a land use development project. It calculates daily or annual criteria air pollutant emissions. CalEEMod® utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the USEPA AP-42 emission factors, CARB's on-road and off-road equipment emission models such as the Emission FACTor model (EMFAC) and the Emissions Inventory Program model (OFFROAD), and studies commissioned by California agencies such as the California Energy Commission (CEC) and CalRecycle (USEPA 2023). In addition, CalEEMod® contains default values and existing regulation methodologies to use in each specific local air district region. Appropriate statewide default values can be utilized if regional default values are not defined. Ramboll used default factors for the Kern County area (within the SJVAPCD's jurisdiction) for the emissions inventory, unless otherwise noted in the methodology descriptions below.

CARB In-Use Off-Road Equipment model (OFFROAD2017)

OFFROAD2017 is CARB's most current off-road emissions inventory model. The exhaust emission factors for each equipment at each horsepower range were back-calculated from total daily emissions reported in the model output files and annual usage in terms of horsepower-hours for each equipment type in the specified region and calendar year. These emission factors are then used in the calculation of baseline and project emissions for each type of equipment utilized at the Facility.

SJVAPCD Annual Emissions Inventory

An annual emissions inventory (AEI) is compiled by SJVAPCD for all permitted sources at the Facility. Ramboll relied on emission factors that are published in the Facility's 2018 AEI to calculate criteria air pollutant emissions for permitted sources at the Facility. Material throughputs and other usage data was taken from the Facility's 2018 AEI to calculate baseline 2018 emissions and scaled up by the expected increase in throughput to calculate project emissions.

Other Resources

Where possible, Ramboll utilized Facility-specific data to estimate baseline and project emissions. This data was obtained through communication with Facility personnel (e.g., for activity information for operational off-road equipment, or laboratory solvent emissions) as well as from previous permit applications (e.g., CSA emissions).

Unmitigated Construction Emissions

This section describes the calculation of criteria air pollutant emissions from construction activities at the project site. While the exact construction schedule and equipment mix may vary from the current analysis, the emissions are not expected to be higher than that calculated given the conservative assumptions included in the analysis.

The major construction phases included in this analysis are:

- **Site Preparation:** involves clearing vegetation (grubbing and tree/stump removal) and removing stones and other unwanted material or debris prior to grading.
- **Grading:** involves the cut and fill of land to ensure the proper base and slope for the construction foundation.
- **Paving:** involves the laying of concrete or asphalt such as in parking lots or roads.
- **Building Construction:** involves the construction of structures and buildings.
- **Plastic Liner Installation:** involves the installation of a plastic liner for each WMU

Emissions from Construction Equipment

The emission calculations associated with construction equipment are from off-road equipment engine use based on the equipment list and phase length, and on-road vehicle trips and phase length.

Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod® methodology assumes all of the equipment operates on diesel fuel. The calculations include the running exhaust emissions from off-road equipment.

Project construction would include on-site equipment during grading/excavation and site preparation that generates fugitive dust. The combustion emissions from this equipment were calculated using CalEEMod® methodology; the fugitive dust emissions from this equipment were calculated using the quantity of material moved and AP-42 emissions factors.

Fugitive Dust Emissions

Fugitive dust sources for the project construction include grading, scraper loading, stockpile wind erosion, and on-road vehicle travel. Grading emissions are calculated based on the total estimated construction area disturbed during grading, while scraper loading emissions are calculated using the quantity of material moved. Stockpile wind erosion emissions are based on AP-42 methodology (USEPA 2006). On-road fugitive dust is calculated based on the on-road construction vehicle miles traveled (VMT), using trip counts and trip lengths.

Emissions from Rail Transport

Locomotives are used to deliver a portion of the project materials during the plastic liner installation of the WMUs. The emissions from rail transport were calculated based on the ton-miles of transport and emission factors from USEPA guidance (USEPA 2009).

Ton-miles is a unit of measurement specific to the rail industry and is calculated as the product of the total train weight and distance the train travelled. Project-specific ton-miles were calculated for the construction of each WMU using the proportion of a standard rail delivery associated with the transportation of project-specific materials and a project-specific trip length. The total tons of a standard delivery were calculated based on a review of annual industry reports. The proportion associated with each WMU was calculated as the ratio of cars required to transport project-related materials to the average number of rail cars in a train. Emissions are quantified for the portion of rail transport that occurs within the San Joaquin Air Basin.

Emissions from On-Road Construction Trips

Construction generates on-road vehicle criteria air pollutant emissions from personal vehicles for worker and vendor commuting. These emissions are based on the number of trips and VMT along with emission factors from EMFAC2017. Starting and idling emissions were also calculated by multiplying the number of trips by the respective emission factor for each pollutant. Emissions from hauling trips are not represented as excavated soil material hauling was completed using off-road equipment (scrapers) which are represented under off-road equipment emissions.

Operational Emissions

This section describes the calculation of criteria air pollutant emissions from operational activities at the project site. Operational emissions are evaluated for baseline conditions in 2018 and for the first year of project operation in 2022.

Mobile Sources

The criteria air pollutant emissions associated with on-road mobile sources are generated from employees, vendors, and waste delivery trucks travelling to and from the project site. The emissions associated with on-road mobile sources include running, idling and starting exhaust emissions as well as fugitive emissions associated with tirewear, brakewear and entrained road dust. Mobile source emissions were calculated using the trip rates and trip length information based on analyses conducted by Gibson Transportation Consulting, Inc (GTC) and weighted emission factors from EMFAC2017. The CalEEMod[®] default fleet mix was used to determine the mix of light-duty vehicles used for passenger vehicles. For vendor vehicles, it was assumed that half would be medium-heavy-duty and the other half would be heavy-heavy-duty trucks. The waste trucks were assumed to all be heavy-heavy-duty trucks.

The Facility uses off-road equipment for landfill management activities. The criteria air pollutant emissions from these equipment were estimated using emission factors from OFFROAD2017. The baseline emissions are calculated based on 2018 activity provided by the Facility, while the Total Facility 2022 emissions are calculated for the year 2022 assuming the same level of activity plus the addition of a dozer, a compactor, and an extra water truck.

Stationary Sources

The project includes permitted sources for stationary emissions. Permitted equipment and associated permission factors were sourced from the existing Facility's 2018 Annual Emissions Inventory (AEI). Stationary sources include the stabilization treatment units, silos, wastewater storage tank, auger shredder, gasoline dispensing, emergency generator testing and use, WMU 35, and a fire pump engine. Additional stationary sources to be built as part of the project include four new unloading bays, four new tank treatment buildings and new silos. These sources are expected to generate VOC and PM emissions. Project emissions from these stationary sources are calculated by scaling baseline emissions associated with the STU bays, auger shredder, and silos, respectively. Scaling factors are calculated based on the ratio of potential maximum daily and annual capacity of the new tank treatment buildings and the amount of material processed in 2018.

The mechanics shop, administration area, lab, security building, and paint recycling building would have associated architectural coating and consumer products emissions. CalEEMod[®] was utilized to estimate the baseline and project emissions.

The WMUs for the project (36, 37, and 38) would generate fugitive VOC and PM emissions from spreading/compacting, waste dumping, open face area, and inactive covered waste. To estimate these emissions, the 2018 baseline emissions inventory for WMU 35 was scaled up to potential maximum operation of the new WMUs. The scaling factors are calculated based on the ratio of potential maximum daily and annual capacity of the new WMUs and the amount of material processed through WMU 35 in 2018.

Waste Processing Activities in the Laboratory

The laboratories at the Facility use solvents that contain volatile organic compounds. The calculations assume no solvent recovery and complete volatilization of each solvent. Laboratory activities are expected to remain at baseline levels during project operation; therefore there are no project emissions are expected from laboratories.

Health Risk Assessment

A Health Risk Assessment (HRA) estimates potential acute, chronic, and carcinogenic health risks from a project. The approach to estimating cancer risk from long-term inhalation exposure to carcinogens requires calculating a range of potential doses and multiplying by cancer potency factors in units of inverse dose to obtain a range of cancer risks. For cancer risk, the risk for each age group is calculated using the appropriate breathing rates, age sensitivity factors, exposure duration, and cancer risks calculated for individual age groups are summed to estimate cancer risk based on assumed exposure durations. Note that PM₁₀ exhaust emissions are used as a surrogate for DPM based on guidance from the Office of Environmental Health Hazard Assessment.

EPA's AERMOD atmospheric dispersion model was used to estimate concentrations of ambient air pollutants. AERMOD is EPA's recommended air dispersion model for near-field modeling from vented and non-vented sources. The model uses hourly meteorological observations and emission rates to determine hourly average concentrations from which other averaging periods (e.g., 24-hour, annual averages) are determined.

Detailed modeling assumptions and results are provided in Appendix C of this Draft EIR.

CO Hotspots

Heavy traffic congestion can contribute to high levels of CO. Individuals exposed to these CO “hot-spots” may have a greater likelihood of developing adverse health effects. The potential for the proposed project to result in localized CO impacts at intersections resulting from addition of its traffic volumes is assessed based on Kern County’s suggested criteria, which recommends performing a localized CO impact analysis for intersections operating at or below level of service (LOS) E. Based on the Traffic Study prepared for the project (Appendix J, all intersections and street segments were found to operate at LOS C or better in all scenarios. Therefore, this section does not warrant a more detailed CO analysis as no projected impacts show a LOS of E or F.

Visibility Impacts

The County guidance states that potential impacts to visibility should be evaluated for all industrial projects and any other projects, such as mining projects, that have components that could generate dust or emissions related to visibility.

CARB does not yet have a measurement method that is accurate or precise enough to designate areas in the state as being in attainment or nonattainment. Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. Except for Lake County (which is designated to be in attainment), California’s attainment status with respect to visibility-reducing particles is currently designated as unclassified. SJVAPCD does not require a visibility analysis and does not provide any guidance for visibility analyses.

Valley Fever Exposure

While there are no specific thresholds for the evaluation of potential Valley Fever exposure, the potential for Valley Fever exposure as a result of the project is evaluated based on the anticipated earth-moving activities, and considers applicant-proposed measures and compliance with Rule 8021, Section 6.3, which requires development and implementation of a dust control plan to help control the release of the *Coccidioides immitis* fungus during construction activities.

Asbestos

There are no quantitative thresholds related to receptor exposure to asbestos.

Odors

According to SJVAPCD’s *Guidance for Assessing and Mitigating Air Quality Impacts*, each project that will generate odors should be evaluated to determine the likelihood that it would result in nuisance odors. SJVAPCD recognizes the subjective nature of odor impacts and recommends that each project should be assessed on a “case-by-case” basis, taking into consideration all available pertinent information to qualitatively determine if a significant impact is likely to occur. To facilitate the evaluation of odors,

SJVAPCD has produced a list of common types of facilities, along with the distance from the source within which odors could possibly be significant. According to the list, the screening distance for sanitary landfills is 1 mile. Sources receiving more than one confirmed complaint per year averaged over a three-year period, or three unconfirmed complaints per year averaged over a three-year period, may be considered to cause significant odor problems.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant adverse effect related to air quality.

A project could have a significant adverse effect on air quality if it would:

- a. Conflict with or obstruct implementation of the applicable air quality plan;
- b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard;
- c. Expose sensitive receptors to substantial pollutant concentrations;
- d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SJVAPCD has adopted guidelines for implementing CEQA which are applied during CEQA review of projects for which SJVAPCD is the lead agency. However, Kern County is the CEQA lead agency for the proposed project and will make the determination as to whether or not the proposed project may have a significant effect on the environment. Kern County’s determination will take into consideration SJVAPCD’s criteria but will ultimately be based upon the thresholds adopted by Kern County.

The SJVAPCD has adopted the following thresholds of significance (SJVAPCD 2015b):

TABLE 4.3-6: SJVAPCD CEQA AIR QUALITY SIGNIFICANCE THRESHOLDS

Pollutant	Construction Emissions (tons/year)	Operational Emissions (tons/year)	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
ROG	10	10	10
NOx	10	10	10
CO	100	100	100
SOx	27	27	27
PM ₁₀	15	15	15
PM _{2.5}	15	15	15

Sources: SJVAPCD 2015b; Appendix B.

SJVAPCD’s permitting and CEQA thresholds of significance for health risks associated with TACs emitted from a project are summarized as follows:

- **Carcinogens:** increased cancer risk of 20 per one million or greater for the maximally exposed individual.

- **Non-Carcinogens:** hazard index of greater than 1 for the maximally exposed individual. Note that the hazard index is expressed as a ratio of exposure levels to acceptable levels.

These significance thresholds were set in “Framework for Performing Health Risk Assessments” (APR-1906) following changes to the state HRA guidelines (i.e., the Hot Spots Guidance), and are consistent with SJVAPCD’s risk management policy (SJVAPCD 2018).

Project Impacts

Impact 4.3-1: The project could conflict with or obstruct implementation of the applicable air quality plan.

CEQA *Guidelines* and the CAA (Sections 176 and 316) contain specific references regarding the need to evaluate consistencies between the project and the applicable air plan for the projects. To accomplish this, CARB has developed a three-step approach to determine project conformity with the applicable Air Quality Attainment Plan (AQAP):

- *Determination that an AQAP is being implemented in the area where the project is being proposed.* SJVAPCD has implemented the current, modified 2016 8-hour AQAP as approved by CARB and approved by USEPA for the 2008 8-hour O₃ standard.
- *The project must be consistent with the growth assumptions of the applicable AQAP.* The Kern Council of Governments (COG) growth modeling for the 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) provides for future employment/population factors.
- *The project must contain in its design all reasonably available and feasible air quality control measures.* The project incorporates various policy and rule-required implementation measures that would reduce related emissions.

As discussed in Section 2.3, SJVAPCD’s air quality plans rely on information from CARB and Kern Council of Governments (Kern COG) to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and Kern COG growth projections are based on population, vehicle trends, and land use plans developed by the cities and Kern County as part of the development of their general plans. As such, projects that propose development that is consistent with the growth anticipated by the general plan(s) would be consistent with the growth projections of the SIP because associated emissions of criteria pollutants in a designated non-attainment area would be accounted for in these air quality plans. If a project proposes development that is greater than anticipated in Kern COG’s growth projections, the project would be in conflict with the regional air quality attainment plans and SIP and could potentially result in a significant air quality impact.

The project is within the growth projections developed by Kern COG for the area, given that the project is expected to add just a small amount of new personnel who may choose to live in the area. The project also does not involve a change in land use type that would conflict with that established in the Kern County general plan. The project shows conformity with CARB’s three step approach and the project growth was anticipated by the Kern COG RTP/SCS and incorporated into the AQAP.

The project will comply with all applicable state and federal air pollution control laws and regulations, and with applicable rules and regulations of the SJVAPCD during construction and operations, including obtaining the required permit for the modified Facility. Failure to comply with applicable rules and regulations for emissions could result in a potentially significant impact. This would include compliance with SJVAPCD Rule 8021 for fugitive dust emissions control, included as Mitigation Measure 4.3-1.

Mitigation Measures

MM 4.3-1: The project shall continuously comply with applicable rules and regulations set forth by the San Joaquin Valley Air Pollution Control District.

MM 4.3-2: Prior to issuance of grading permit, the project proponent shall submit a Site-Specific Fugitive Dust Control Plan per SJVAPCD Rule 8021 (fugitive dust emissions control from construction, demolition, excavation, extraction, and other earthmoving activities) to Kern County Planning and Natural Resources Department for review and approval. The Fugitive Dust Control Plan shall reduce emissions, during construction of PM₁₀ and PM_{2.5}. The Fugitive Dust Control Plan shall include:

1. Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submission and implementation of the plan.
2. Description and location of operation(s).
3. Listing of all fugitive dust emissions sources included in the operation.
4. The following dust control measures shall be implemented:
 - a. All on-site unpaved roads shall be effectively stabilized use water or chemical soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than CARB-approved soil stabilizers, and that shall not increase any other environmental impacts included loss of vegetation.
 - b. All material excavated or graded will be sufficiently watered to prevent excessive dust. Watering will occur as needed with complete coverage of disturbed areas. The excavated soil piles will be watered as needed to limit dust emissions to less than 20 percent opacity or covered with temporary coverings.
 - c. Construction activities that occur on unpaved surfaces will be discontinued during windy conditions when winds exceed 25 miles per hour and those activities cause visible dust plumes. Construction activities may continue if dust suppression measures are used to minimize visible dust plumes.
 - d. Track-out debris onto public paved roads shall not extend 50 feet or more from an active operation and track-out shall be removed or isolated such as behind a locked gate at the conclusion of each workday.
 - e. All hauling materials should be moist while being loaded into dump trucks.
 - f. All haul trucks hauling soil, sand and other loose materials on public roads shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).

- g. Soil loads should be kept below 6 inches or the freeboard of the truck.
- h. Drop heights should be minimized when loaders dump soil into trucks.
- i. Gate seals should be tight on dump trucks.
- j. Traffic speeds on unpaved roads shall be limited to a maximum of 25 miles per hour.
- k. All grading activities shall be suspended when visible dust emissions exceed 20 percent.
- l. Other fugitive dust control measures as necessary to comply with SJVAPCD Rules and Regulations.
- m. Disturbed areas should be minimized.

Level of Significance after Mitigation

Implementation of MM 4.3-1 and MM 4.3-2 for fugitive dust control would ensure that the project would not obstruct an air quality plan during construction or operation. Impacts would be less than significant.

Impact 4.3-2: The project could 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.

Per Table 4.3-2, the project region is a designated non-attainment area for ozone (the State 1-hour O₃; federal and State 8-hour O₃) and particulate matter (State PM₁₀; federal and State PM_{2.5}).

Construction

The project’s construction emissions prior to mitigation are shown in **Table 4.3-7, Unmitigated Construction Emissions Compared to Thresholds.**

TABLE 4.3-7: UNMITIGATED CONSTRUCTION EMISSIONS COMPARED TO THRESHOLDS

Year	Unmitigated Annual Construction Emission Estimates (ton/year)						Unmitigated Daily Construction Emission Estimates(lb/day)					
	VOC ¹	NO _x	CO	SO _x	2 PM ₁₀	2 PM _{2.5}	VOC ¹	NO _x	CO	SO _x	2 PM ₁₀	2 PM _{2.5}
2022												
Off-Road	0.7	7.2	5.4	0.01	0.3	0.3	12.0	123	92	0.21	5.3	4.9
On-Road ⁵	0.0	0.1	0.3	0.001	0.0	0.0	0.1	0.0	0.4	0.000	0.2	0.0
Fugitive Dust	—	—	—	—	0.9	0.1	—	—	—	—	17	1.2
Total	1	7	6	0.013	1	0	12	123	92	0.21	22	6
2027												
Off-Road	0.8	8.5	5.8	0.01	0.3	0.3	12.0	126	86	0.22	5.1	4.7
On-Road ⁵	0.0	0.0	0.2	0.001	0.0	0.0	0.0	0.0	0.2	0.000	0.1	0.0

TABLE 4.3-7: UNMITIGATED CONSTRUCTION EMISSIONS COMPARED TO THRESHOLDS

Year	Unmitigated Annual Construction Emission Estimates (ton/year)						Unmitigated Daily Construction Emission Estimates (lb/day)					
	VOC ¹	NO _x	CO	SO _x	2 PM ₁₀	2 PM _{2.5}	VOC ¹	NO _x	CO	SO _x	2 PM ₁₀	2 PM _{2.5}
Fugitive Dust	—	—	—	—	0.9	0.1	—	—	—	—	15	0.9
Total	1	9	6	0.015	1	0	12	126	86	0.22	20	6
2032												
Off-Road	0.6	6.0	4.1	0.01	0.2	0.2	10.0	103	70	0.18	4.3	3.9
On-Road ⁵	0.0	0.0	0.2	0.001	0.0	0.0	0.0	0.0	0.1	0.000	0.1	0.0
Fugitive Dust	—	—	—	—	0.6	0.0	—	—	—	—	11	0.7
Total	1	6	4	0.011	1	0	10	103	70	0.18	15	5
Maximum Emissions	1	9	6	0.015	1.3	0.4	12	126	92	0.22	22.3	6.0
SJVAPCD Significance Thresholds ^{3,4}	10	10	100	27	15	15	100	100	100	100	100	100
Exceeds Threshold for Any Year of Construction?	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO

- 1 For purposes of this analysis VOC emissions are assumed to be equal to ROG.
- 2 PM emissions are estimated as a sum of exhaust, tire wear, brake wear, and fugitive emissions.
- 3 San Joaquin Valley Air Pollution Control District Air Quality Thresholds of Significance - Criteria Pollutants. Available at <http://www.valleyair.org/transportation/0714-GAMAQI-Criteria-Pollutant-Thresholds-of-Significance.pdf>. Accessed: January 2020.
- 4 San Joaquin Valley Air Pollution Control District Ambient Air Quality Analysis Thresholds. Available at http://www.valleyair.org/policies_per/Policies/APR-2030.pdf. Accessed: January 2020.
- 5 Annual on-road emissions include both mobile on-road, as well as rail transportation emissions. Daily on-road emissions include on-site mobile source emissions only.

The project emissions would exceed the SJVAPCD’s significance thresholds for NO_x on an annual and daily basis. Therefore, impacts during construction would be significant for NO_x and mitigation is required. Application of Mitigation Measure 4.3-2, which requires half of the scrapers used during the excavation/grading of landfill phases for WMU 36, 37, and 38 to be certified as Tier 4 equipment, will result in construction annual and daily emissions below significance for all pollutants, as seen in **Table 4.3-8, Mitigated Construction Emissions Compared to Thresholds.**

TABLE 4.3-8: MITIGATED CONSTRUCTION EMISSIONS COMPARED TO THRESHOLDS

Year	Mitigated Annual Construction Emission Estimates						Mitigated Daily Construction Emission Estimates					
	VOC ¹	NO _x	CO	SO _x	2 PM ₁₀	2 PM _{2.5}	VOC ¹	NO _x	CO	SO _x	2 PM ₁₀	2 PM _{2.5}
	ton/yr						lb/day					
2022												
Off-Road	0.6	5.5	5.5	0.01	0.2	0.2	9.6	92	94	0.21	4.0	3.7

TABLE 4.3-8: MITIGATED CONSTRUCTION EMISSIONS COMPARED TO THRESHOLDS

Year	Mitigated Annual Construction Emission Estimates						Mitigated Daily Construction Emission Estimates					
	VOC ¹	NO _x	CO	SO _x	2 PM ₁₀	2 PM _{2.5}	VOC ¹	NO _x	CO	SO _x	2 PM ₁₀	2 PM _{2.5}
	ton/yr	lb/day										
On-Road ⁵	0.0	0.1	0.3	0.001	0.0	0.0	0.1	0.0	0.4	0.000	0.0	0.0
Fugitive Dust	—	—	—	—	0.9	0.1	—	—	—	—	17	1.2
Total	1	6	6	0.013	1	0	10	92	94	0.21	21	5
2027												
Off-Road	0.6	6.1	5.9	0.01	0.3	0.2	8.9	85	89	0.22	3.5	3.2
On-Road ⁵	0.0	0.0	0.2	0.001	0.0	0.0	0.0	0.0	0.2	0.000	0.0	0.0
Fugitive Dust	—	—	—	—	0.9	0.1	—	—	—	—	15	0.9
Total	1	6	6	0.015	1	0	9	85	89	0.22	18	4
2032												
Off-Road	0.4	4.3	4.2	0.01	0.2	0.2	7.6	73	72	0.18	3.0	2.8
On-Road ⁵	0.0	0.0	0.2	0.001	0.0	0.0	0.0	0.0	0.1	0.000	0.0	0.0
Fugitive Dust	—	—	—	—	0.6	0.0	—	—	—	—	11	0.7
Total	0	4	4	0.011	1	0	8	73	72	0.18	14	4
Maximum Emissions	1	6	6	0.015	1.2	0.3	10	92	94	0.22	20.9	4.9
SJVAPCD Significance Thresholds ^{3,4}	10	10	100	27	15	15	100	100	100	100	100	100
Exceeds Threshold for Any Year of Construction?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

- 1 For purposes of this analysis VOC emissions are assumed to be equal to ROG.
- 2 PM emissions are estimated as a sum of exhaust, tire wear, brake wear, and fugitive emissions.
- 3 San Joaquin Valley Air Pollution Control District Air Quality Thresholds of Significance - Criteria Pollutants. Available at <http://www.valleyair.org/transportation/0714-GAMAQI-Criteria-Pollutant-Thresholds-of-Significance.pdf>. Accessed: January 2020.
- 4 San Joaquin Valley Air Pollution Control District Ambient Air Quality Analysis Thresholds. Available at http://www.valleyair.org/policies_per/Policies/APR-2030.pdf. Accessed: January 2020.
- 5 Annual on-road emissions include both mobile on-road, as well as rail transportation emissions. Daily on-road emissions include on-site mobile source emissions only.

Operation

The project’s operational emissions are shown in **Table 4.3-9, Operational Emissions Compared to Thresholds.**

TABLE 4.3-9: OPERATIONAL EMISSIONS COMPARED TO THRESHOLDS

Unit	Emissions (ton/year) ¹						Emissions (lb/day) ^{1,2}					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Permitted						Permitted On-Site					
Tank Treatment Buildings, Unloading Bays, and Silos	0.42	0.00	0.00	0.00	0.59	0.59	3.37	0.00	0.00	0.00	4.74	4.74
WMUs	14.59	0.00	0.00	0.00	5.96	5.96	79.93	0.00	0.00	0.00	45.64	45.64
Permitted Sub-Total	15.01	0.00	0.00	0.00	6.55	6.55	83.30	0.00	0.00	0.00	50.39	50.39
	Non-Permitted						Non-Permitted On-Site ²					
Mobile On-road	-0.02	31.73	1.78	0.18	5.63	1.62	0.17	4.38	2.87	0.02	0.41	0.11
Administrative and Laboratory Buildings ⁴	0	0	0	0	0	0	0	0	0	0	0	0
Paint Recycling Building	0.53	0	0	0	0	0	3.91	0	0	0	0	0
Off-Road	0.11	0.21	0.63	0.00	0.01	0.01	0.84	1.64	4.83	0.01	0.06	0.06
Non-Permitted Sub-Total	0.63	31.94	2.41	0.18	5.63	1.63	4.92	6.02	7.71	0.03	0.47	0.17
Overall Total	—	—	—	—	—	—	88.23	6.02	7.71	0.03	50.85	50.56
SJVAPCD Significance Thresholds ³	10	10	100	27	15	15	100	100	100	100	100	100
Exceeds Thresholds?	YES - PERMITTED	YES - NON-PERMITTED	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

¹ Emissions are calculated by multiplying permitted equipment throughput with the appropriate emission factor. Emission factors are presented in Table 4-3a.

² Daily Emissions are compared against SJVAPCD AAQA emission thresholds which only consider on-site emissions. Therefore, only on-site emissions from non-permitted sources are shown in this table. Daily emissions for WMU volatilization and administrative building architectural coating off-gassing are calculated assuming constant emissions (365 days/year). Daily emissions for all other sources are calculated based on Facility operation (261 days/year).

³ Annual SJVAPCD thresholds correspond to CEQA emission thresholds, while daily SJVAPCD thresholds correspond to AAQA emission thresholds. Annual SJVAPCD thresholds are individually evaluated against the permitted and non-permitted operational emission inventories.

⁴ Admin buildings presented as part of baseline will be relocated on-site and are not expected to result in a change in emissions. Therefore, there are no expected additional emissions from existing admin and laboratory buildings due to the project.

As shown, the project annual permitted VOC emissions and annual non-permitted NO_x emissions are above the SJVAPCD thresholds, while the permitted and non-permitted annual emissions are below for PM₁₀, PM_{2.5}, and SO_x. Daily operational emissions are below for all pollutants. The project is considered significant and unavoidable for VOC and NO_x based on the comparison of project annual operational emissions to the SJVAPCD thresholds.

The project will comply with all applicable state and federal air pollution control laws and regulations, and with applicable rules and regulations of the SJVAPCD during construction and operations, including obtaining the required permit for the modified Facility. For example, the project would comply with SJVAPCD Rule 8021 (fugitive dust emissions control from construction, demolition, excavation, extraction, and other earthmoving activities) as described in MM-4.3-1, SJVAPCD Rule 8011 (fugitive dust administrative requirements for control of fine particulate matter), SJVAPCD Rule 8041 (fugitive dust emissions control from carryout and trackout), SJVAPCD Rule 8061 (fugitive dust emissions control from paved vehicle and equipment traffic areas) and SJVAPCD Rule 8071 (fugitive dust emissions control from unpaved vehicle and equipment traffic areas). The project proponent shall also enter into a Voluntary Emissions Reduction Agreement (VERA) with the SJVAPCD to reduce operational emissions of reactive ROG and NOx. This measure is included as MM 4.3-3.

Mitigation Measures

MM 4.3-3: The project proponent and/or its contractors shall continuously implement the following measures during construction and operation of the project to control emissions from the on-site equipment:

- a. All equipment shall be maintained in accordance with the manufacture's specifications.
- b. All equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for extended periods of time. Engine idling of all equipment shall be minimized.
- c. Construction equipment shall not operate longer than eight cumulative hours per day.
- d. All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NOX emissions.
- e. On-road and off-road diesel equipment shall use diesel particulate filters (or the equivalent) if permitted under manufacturer's guidelines.
- f. All on-site off-road equipment and on-road vehicles shall meet the recent California Air Resources Board engine emission standards or alternatively fueled equipment, such as compressed natural gas, liquefied natural gas, or electric, as appropriate.

MM 4.3-4: The project proponent shall enter into a Voluntary Emissions Reduction Agreement (VERA) with the San Joaquin Valley Air Pollution Control District (SJVAPCD) to reduce operational emissions of reactive organic gases (ROG) and oxides of nitrogen (NOx). Following implementation of on-site mitigation measures, project emissions of ROG and NOx above the SJVAPCD annual threshold shall be offset through the VERA. The project proponent and SJVAPCD shall enter into a contractual agreement in which the project proponent agrees to mitigate project emissions by providing funds for the SJVAPCDs incentives programs. The funds are disbursed by SJVAPCD in the form of grants for projects that achieve emission reductions. Types of emission reduction projects that have been funded in the past include electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors. The project proponent shall report annually through the Mitigation Monitoring and Reporting program on compliance with the VERA.

Level of Significance after Mitigation

Based on the assessment above, short-term (construction) emissions from project construction are considered less than significant after implementation of MM 4.3-1 through MM 4.3-3. These measures would not reduce operational emissions of VOC and NO_x to a less-than-significant level. Therefore, MM 4.3-4 would be required. However, the reductions provided by MM 4.3-4 may not completely offset the emissions that exceed the impact threshold. Therefore, the project impact would be significant and unavoidable for operational VOC and NO_x emissions.

Impact 4.3-3: The project could expose sensitive receptors to substantial pollutant concentrations.

The construction-related and operational health risk assessment results were used to assess if the project would expose sensitive receptors to substantial pollutant concentrations. The construction analysis evaluates the health risk resulting from off-road equipment DPM emissions during construction of the tank treatment buildings, the administrative buildings, the paint recycling building, WMU 36, 37, and 38, as well as the DPM emissions from on-site mobile trips. The operational analysis evaluated cancer and non-cancer health impacts of fugitive and non-fugitive TAC emissions from waste processed in WMUs and tank treatment buildings (TTBs) constructed as part of the project. In addition, the health impact of the operational DPM emissions from the project-related vendor vehicles and heavy-duty trucks when idling and travelling on-site were assessed.

The cancer risk, chronic hazard index and acute hazard index results for the project are summarized below:

- The estimated cancer risks at the maximally exposed individuals (MEI) for operation of the project range from 0.0056 in a million to 0.21 in a million; the estimated cancer risks at the MEI for construction of the project range from 0.0011 in a million to 0.0082 in a million. The total cancer risk for both the operation and construction of the project are 0.02 in a million, 0.008 in a million, 0.2 in a million, and 0.1 in a million for residents in Buttonwillow, residents in McKittrick, maximally exposed individual resident (MEIR) and maximally exposed individual worker (MEIW), respectively, all well below the SJVAPCD threshold of 20 in one million for cancer risk.
- The estimated chronic hazard indexes at the MEIs for operation of the project range from 0.0010 to 0.046; the estimated chronic hazard indexes at the MEIs for construction of the project range from 0.000034 to 0.00026. The total chronic hazard index for both the operation and construction of the project are 0.003, 0.001, 0.04, and 0.05 for residents in Buttonwillow, residents in McKittrick, MEIR and MEIW, respectively, all well below the SJVAPCD threshold of 1.0 for chronic hazard index.
- The total acute hazard index at the point of maximum impact (PMI) is 0.4, below the SJVAPCD threshold of 1.0 for acute hazard index.

In addition, soil concentrations due to deposition for three metals without inhalation toxicities were estimated using the recommended assumptions and equations from the Hot Spots Guidance. Resulting concentrations of chemicals of potential concern (COPCs) in soil were compared to soil screening levels recommended in USEPA's Regional Screening Levels (RSLs) (USEPA 2022). The estimated soil concentrations of these three COPCs are well below their respective residential or commercial/industrial

soil screening levels, and the health impacts associated with direct contact with soil for these chemicals are expected to be negligible.

Modeling of the potential exposures to lead through all pathways using DTSC's recommended LeadSpread8 model (for a child resident) estimated that the 90th percentile incremental blood-lead level for a child receptor located at the MEIR, Buttonwillow and McKittrick were 0.003 $\mu\text{g}/\text{deciliter}$ (dl), 0.0003 $\mu\text{g}/\text{dl}$ and 0.00008 $\mu\text{g}/\text{dl}$, respectively. Modeling of the potential exposures to lead through all relevant pathways for the commercial/industrial workers using the DTSC Modified Version of USEPA's Adult Lead Model estimated that the 90th percentile incremental blood-lead level for the fetus of an adult worker located at the MEIW was estimated to be 0.006 $\mu\text{g}/\text{dl}$. All model-predicted incremental blood lead levels were well below the threshold of 1 $\mu\text{g}/\text{dl}$. In addition, the estimated airborne lead concentrations at the maximally exposed individuals are also all well below the California Ambient Air Quality Standard (30-day average) of 1.5 $\mu\text{g}/\text{m}^3$.

Therefore, the health impacts for resident or worker populations in the vicinity of the project site due to potential exposures to emissions from the operational and construction activities for the proposed project are well below SJVAPCD thresholds of significance. Therefore, no unacceptable risk is anticipated.

Refer to the Health Risk Assessment Technical Report in Appendix C for further details.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.3-4: The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Odors

Odor refers to the perception or sensation experienced when one or more volatilized chemical compounds come in contact with receptors on the olfactory nerves. Odorant refers to any volatile chemical in the air that is part of the perception of odor by a human. The difference in sensory and physical responses experienced by individuals is responsible for the significant variability in the individual sensitivity to the quality and intensity of an odorant. Types of land uses that typically pose potential odor problems include agriculture, wastewater treatment plants, food processing and rendering facilities, chemical plants, composting facilities, landfills, waste transfer stations, and dairies. In addition, the occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.

Sources receiving more than one confirmed complaint per year averaged over a three-year period, or three unconfirmed complaints per year averaged over a three-year period, may be considered to cause significant odor problems. Based on SJVAPCD records, there have only been 3 odor complaints, received back in

1999-2000. Given the lack of odor complaints for the Facility at the existing landfill capacity and the surrounding land use, the odor impact for the project is expected to be less than significant.

Valley Fever

The *Coccidioides immitis* fungus spores found in soil, which are responsible for transmitting the Valley Fever, can disperse in the air when the soil is disturbed during construction activities, and then can be inhaled into the lungs. In 2018, the incidence rate of Valley Fever in the project area (Valley West - Kern County) was approximately 480 cases per 100,000 people. Statewide, there were 7,546 cases of Valley Fever in 2018, which results in an incidence rate of approximately 19 cases per 100,000 people. Onsite construction workers potentially could be exposed to Valley Fever from fugitive dust generated during construction of the project, notably during grading and other earthmoving activities. Construction activities are subject to SJVAPCD Regulation VIII (Fugitive PM₁₀ Prohibition). Regulation VIII is intended to reduce ambient concentrations of PM₁₀ by requiring actions to prevent, reduce or mitigate anthropogenic fugitive dust emissions. By reducing fugitive dust emissions, Regulation VIII reduces potential exposure to Valley Fever. Since current long-term residents typically already have been exposed to and have developed immunity to Valley Fever, construction activities are not expected to add significantly to exposure of off-site residents to the fungus. Nevertheless, without appropriate dust control measures, the project could result in a potentially significant impact related to Valley Fever. Compliance with Regulation VIII is included in MM 4.3-2. Additional precautions related specifically to exposure to *Coccidioides immitis* are included as MM 4.3-5.

Mitigation Measures

MM 4.3-5: Prior to ground disturbance activities, the project proponent shall implement the following Valley Fever Provisions:

1. Provide evidence to the Kern County Planning and Natural Resources Department that the project operator and/or construction manager has developed a “Valley Fever Training Handout”, training, and schedule of sessions for education to be provided to all construction personnel. All evidence of the training session materials, handout(s) and schedule shall be submitted to the Kern County Planning and Natural Resources Department within 24 hours of the first training session. Multiple training sessions may be conducted if different work crews will come to the site for different stages of construction; however, all construction personnel shall be provided training prior to beginning work. The evidence submitted to the Kern County Planning and Natural Resources Department regarding the “Valley Fever Training Handout” and Session(s) shall include the following:
 - a. A sign-in sheet (to include the printed employee names, signature, and date) for all employees who attended the training session.
 - b. Distribution of a written flier or brochure that includes educational information regarding the health effects of exposure to criteria pollutant emissions and Valley Fever.
 - c. Training on methods that may help prevent Valley Fever infection.
 - d. A demonstration to employees on how to use personal protective equipment, such as respiratory equipment (masks), to reduce exposure to pollutants and facilitate

recognition of symptoms and earlier treatment of Valley Fever. Where respirators are required, the equipment shall be readily available and shall be provided to employees for use during work. Proof that the demonstration is included in the training shall be submitted to the county. This proof can be via printed training materials/agenda, DVD, digital media files, or photographs.

2. The project proponent also shall consult with the Kern County Public Health Services Department to develop a Valley Fever Dust Management Plan that addresses the potential presence of the *Coccidioides* spore and mitigates for the potential for *Coccidioidomycosis* (Valley Fever). Prior to issuance of permits, the project operator shall submit the Plan to the Kern County Public Health Services Department for review and approval. The Plan shall include a program to evaluate the potential for exposure to Valley Fever from construction activities and to identify appropriate safety procedures that shall be implemented, as needed, to minimize personnel and public exposure to potential *Coccidioides* spores. Measures in the Plan shall include the following:
 - a. Provide High-Efficiency Particulate Air (HEPA) filters for heavy equipment equipped with factory enclosed cabs capable of accepting the filters. Require contractors utilizing applicable heavy equipment to furnish proof of worker training on proper use of applicable heavy equipment cabs, such as turning on air conditioning prior to using the equipment.
 - b. Provide communication methods, such as two-way radios, for use in enclosed cabs.
 - c. Require National Institute for Occupational Safety and Health (NIOSH)- approved half-face respirators equipped with minimum N-95 protection factor for use during worker collocation with surface disturbance activities, as required per the hazard assessment process.
 - d. Cause employees to be medically evaluated, fit-tested, and properly trained on the use of the respirators, and implement a full respiratory protection program in accordance with the applicable California Occupational Safety and Health Administration Respiratory Protection Standard (8 CCR 5144).
 - e. Provide separate, clean eating areas with hand-washing facilities.
 - f. Install equipment inspection stations at each construction equipment access/egress point. Examine construction vehicles and equipment for excess soil material and clean, as necessary, before equipment is moved off- site.
 - g. Train workers to recognize the symptoms of Valley Fever, and to promptly report suspected symptoms of work-related Valley Fever to a supervisor.
 - h. Work with a medical professional to develop a protocol to medically evaluate employees who develop symptoms of Valley Fever.
 - i. Work with a medical professional, in consultation with the Kern County Public Health Services Department, to develop an educational handout for on-site workers and surrounding residents within three miles of the project site, and include the following information on Valley Fever: what are the potential

sources/ causes, what are the common symptoms, what are the options or remedies available should someone be experiencing these symptoms, and where testing for exposure is available. Prior to construction permit issuance, this handout shall have been created by the project operator and reviewed by the project operator and reviewed by the County. No less than 30 days prior to any work commencing, this handout shall be mailed to all existing residences within three miles of the project boundaries.

- j. When possible, position workers upwind or crosswind when digging a trench or performing other soil-disturbing tasks.
- k. Prohibit smoking at the worksite outside of designated smoking areas; designated smoking areas will be equipped with handwashing facilities.
- l. Post warnings on-site and consider limiting access to visitors, especially those without adequate training and respiratory protection.

Level of Significance after Mitigation

With implementation of MM 4.3-2 and MM 4.3-5, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

The Kern County Planning and Natural Resources Department *Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports* three steps for estimating the potential significance of cumulative impacts: (1) evaluate localized impacts (Guideline Instruction 16a); (2) evaluate consistency with existing air quality plans (Guideline Instruction 16b); and (3) summarize CARB air basin emissions (Guideline Instruction 16c).

The geographic scope for cumulative air quality impacts is a 6-mile radius for regional impacts and a 1-mile radius for impacts on sensitive receptors. These geographic scopes of analysis are appropriate for determining air quality impacts because of the Statewide, regional, and localized nature of air quality impacts, which could occur cumulatively with the project. A list of projects located within a 1-mile and 6-mile radius are described in **Table 3.8** in Chapter 3, Project Description.

The project will comply with all applicable state and federal air pollution control laws and regulations, and with applicable rules and regulations of the SJVAPCD during construction and operations, including compliance with SJVAPCD Rule 8021 for fugitive dust emissions control, included as MM 4.3-2. Therefore, the project would not cumulatively contribute to the obstruction of the AQAP.

As noted previously, the project annual permitted VOC emissions and annual non-permitted NO_x emissions are above the SJVAPCD thresholds. The project would comply with MM 4.3-2 and MM 4.3-3 but emissions would still exceed the applicable thresholds. Therefore, as stated in Impact 4.3-2, based on the region's non-attainment status for ozone, the project would be cumulatively considerable for operational VOC and NO_x emissions.

As described in Impact 4.3-3, cancer and non-cancer health impacts of the project-related construction and operation emissions would be less than significant. The cumulative projects would not contribute to

health risk. No other projects of the type and scale of the proposed project are identified within the cumulative scope.

The proposed project would not generate nuisance operational odors and there have been no odor complaints for the Facility since 1999-2000. Cumulative projects would also not be anticipated to generate nuisance odors. Therefore, there is no existing cumulative impact and the project's contribution would be less than cumulatively considerable.

As previously discussed, current long-term residents typically already have been exposed to and have developed immunity to Valley Fever. However, the project would also comply with MM 4.3-2 and MM 4.3-5 which would ensure that the project's contribution to a potential cumulative impact would be less than cumulatively considerable.

Mitigation Measures

Implement MM 4.3-1 through MM 4.3-5.

Level of Significance after Mitigation

Cumulative impacts would be significant and unavoidable for operational VOC and NO_x emissions (as described in Impact 4.3-2).

4.4.1 Introduction

This section of the EIR describes the affected environment and regulatory setting for biological resources either present or with the potential to be present on the project site. The section includes the physical and regulatory setting for the project; an evaluation of the existing biological conditions on the project site and its vicinity; the criteria used to evaluate the significance of potential impacts on biological resources; the methods used in evaluating these potential impacts; an analysis of potential impacts; and project-specific mitigation. The analysis presented in this section is based on a review of relevant literature, field reconnaissance surveys, and focused biological surveys.

The analysis presented in this section is based on the *Biological Technical Report for Clean Harbors Buttonwillow, LLC, SMU 36, 37 & 38 Nonhazardous Waste Disposal Landfill Project*, (BTR) prepared by Glen Lukos Associates, Inc., December 14, 2021. The BTR is included as Appendix D of this EIR.

During the NOP scoping periods, comment letters were received from the California Native Plant Society and the Kern Audubon Society. These letters are included in Appendix A of this EIR. The issues regarding special status plants and wildlife that may occur on or adjacent to the project are addressed in this analysis.

4.4.2 Environmental Setting

Regional Setting

The project site is located in southern San Joaquin Valley in Kern County, California. The project site is an existing solid waste Facility located in central Kern County at 2500 West Lokern Road, Buttonwillow, CA, approximately 8 miles west of Buttonwillow, on the northern side of Lokern Road. The project site is approximately 2.8 miles east of West Side Highway (Highway 33), 4 miles west of Highway 58, and 11.5 miles west of Interstate (I)-5. The proposed project site is bordered to the north by agricultural land, which historically has included pistachios and alfalfa, and to the west, south and east by oil production.

Climate

The project site is located within the Valley Region, the southern San Joaquin Valley below an elevation of 1,000 feet mean sea level (MSL), which is characterized by relatively low rainfall, relatively high average summer temperatures, and generally mild winters. Average high temperatures range from 57°F in January to 98°F in July, with daily temperatures exceeding 100°F several days in the summer. Average low temperatures range from 35°F in December to 65°F in July (WRCC 2019). Precipitation occurs primarily as rain, most of which falls from December to April, with an average of 5.6 inches of rainfall per year. Precipitation may also occur as a dense fog, known as Tule fog, during the winter. Rain rarely falls during the summer months. The project's elevation is approximately 400 to 355 feet above mean sea level (amsl).

Local Setting

The project site lies in the Antelope Plain on the southwestern perimeter of the San Joaquin Valley, east of the Tumbler Mountain Range. Land slopes of the solid waste Facility are approximately one percent. Natural land surface elevations on the property range from approximately 335 feet above mean 19 sea level (MSL) at the northeast corner of the project site to approximately 410 feet above MSL at the southwest corner of the project site. The majority of the project site is not located within a 100-year Flood Zone (see Figure 3-3, *FEMA Flood Zone Map*). A small portion of the project site is located within the existing designated 100-year Special Flood Hazard Area (SFHA) flood zone.

The project site comprises approximately 640 acres which includes the existing 320-acre solid/hazardous waste Facility. The Facility currently consists of closed hazardous waste WMUs, two operating hazardous WMUs, closed non-hazardous WMUs, two operating non-hazardous WMUs, a STU, a DHSA, and a non-hazardous waste surface impoundment. The project site also includes an approximately 320-acre parcel of undeveloped land immediately east of the developed solid waste Facility. The easterly 85 acres of the expansion parcel were not included in the biological study area, as no project activities or ground disturbance would occur. The biological study area is therefore 555 acres.

The general region surrounding the project site is dominated by agricultural uses, energy production, and undeveloped land. The site is bordered to the north by agricultural land, which historically has included pistachios and alfalfa, and to the west, south and east by oil production. The nearest residentially populated area to the project site is in the unincorporated community of Buttonwillow, California approximately 8 miles to the west. The project site is located approximately 25 miles west of the Bakersfield City limits (31 miles west of downtown Bakersfield), approximately 8 miles west of Buttonwillow, approximately 15 miles south of Lost Hills, approximately 7 miles north of McKittrick, and approximately 20 miles north of Taft.

Plant Communities

During vegetation mapping of the project site, three different vegetation communities/land use types were identified. Three vegetation communities/ land use types occur within the project site as detailed in **Table 4.4-1, Vegetation Community/Land Use Types on the Project Site**, and shown in **Figure 4.4-1, Vegetation Map**. A complete list of plant species identified on the project site during site surveys is provided in **Table 4.4-2, Plant Species Observed**. Taxonomy typically follows The Jepson Manual, 2nd Edition (2012). Common plant names are taken from Baldwin (2012), Munz (1974), and Roberts et al (2004) and Roberts (2008) (cited in the BTR, Appendix D). Acreages of vegetation communities/land use types are provided in Table 4.4-1, *Vegetation Community/Land Use Types on the Project Site*. A description of the vegetation communities and land cover types are provided below the table.

TABLE 4.4-1: VEGETATION COMMUNITY/LAND USE TYPES ON THE PROJECT SITE

Vegetation Community/Land Use Type	Acreage
Shrubland and Grassland Communities	
<i>Atriplex polycarpa</i> (Allscale Scrub) Shrubland Alliance	143.24
<i>Bromus</i> sp. – <i>Hordeum</i> sp. Herbaceous Semi-Natural Grassland	85.70

TABLE 4.4-1: VEGETATION COMMUNITY/LAND USE TYPES ON THE PROJECT SITE

Vegetation Community/Land Use Type	Acreage
Disturbed/Developed	
Disturbed/Developed	326.28
	Total 555.22

TABLE 4.4-2: PLANT SPECIES OBSERVED

Scientific Name	Common Name
Monocots	
Poaceae - Grass family	
* <i>Bromus diandrus</i>	ripgut grass
* <i>Bromus hordeaceus</i>	soft chess
* <i>Bromus madritensis subsp. rubens</i>	foxtail chess
<i>Hordeum depressum</i>	low barley
* <i>Hordeum murinum subsp. leporinum</i>	bare barley
* <i>Phalaris minor</i>	littleseed canary grass
Typhacheae – Cat-Tail Family	
<i>Typha angustifolia</i>	Narrow-leaved cat-tail
Eudicots	
Aizoaceae – Carpet-Weed Family	
* <i>Mesembryanthemum nodiflorum</i>	Small-flowered ice plant
Amaranthaceae - Amaranth family	
<i>Amaranthus albus</i>	Tumbleweed
<i>Atriplex canescens subsp. canescens</i>	fourwing saltbus
<i>Atriplex confertifolia</i>	Spiny saltbush
<i>Atriplex lentiformis subsp. lentiformis</i>	Brewer’s saltbush
* <i>Atriplex polycarpa</i>	allscale
<i>Atriplex spinifera</i>	spinescale saltbush
* <i>Salsola tragus</i>	Russian-thistle
Asteraceae - Sunflower family	
* <i>Centaurea melitensis</i>	tocalote
<i>Erigeron canadensis</i>	common horseweed
<i>Helianthus annuus</i>	western sunflower
* <i>Lactuca serriola</i>	prickly lettuce

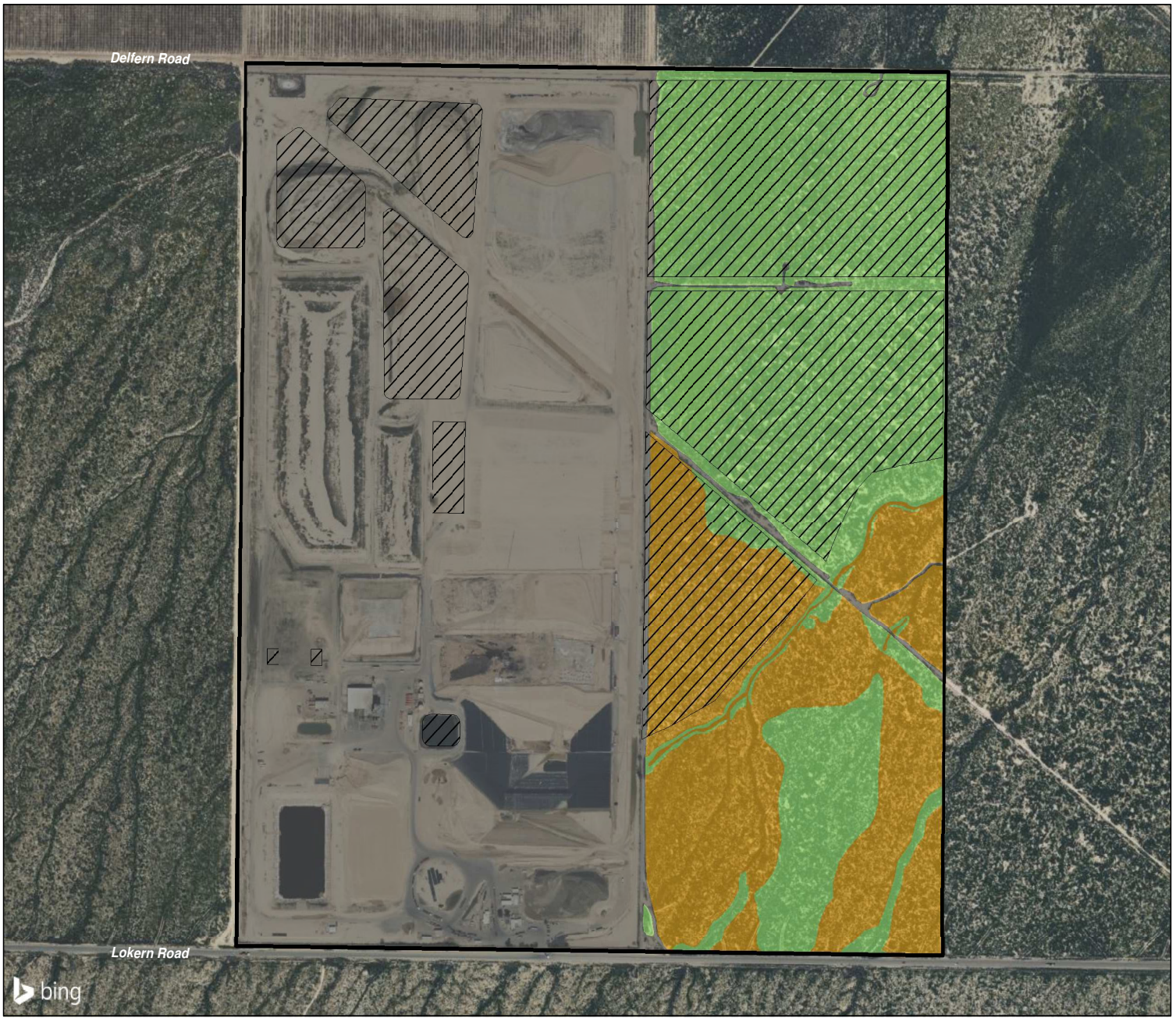
TABLE 4.4-2: PLANT SPECIES OBSERVED






Scientific Name	Common Name
<i>Lasthenia gracilis</i>	coastal goldfields
<i>Layia glandulosa</i>	white layia
<i>Malacothrix coulteri</i>	Snake's head
Boraginaceae - Borage family	
<i>Amsinckia menziesii</i> var. <i>intermedia</i>	common fiddleneck
<i>Amsinckia tessellata</i>	Devil's lettuce
<i>Cryptantha nevadensis</i>	Nevada cryptantha
<i>Phacelia tanacetifolia</i>	Lacy phacelia
<i>Plagiobothrys canescens</i>	valley popcorn
Brassicaceae - Mustard family	
<i>Descurainia sophia</i>	herb sophia
<i>Lepidium nitidum</i> var. <i>nitidum</i>	shining peppergrass
* <i>Sisymbrium irio</i>	London rocket
Geraniaceae - Geranium family	
* <i>Erodium cicutarium</i>	Redstem filaree
Lamiaceae - Mint family	
* <i>Marrubium vulgare</i>	horehound
Malvaceae - Mallow family	
<i>Eremalche exilis</i>	white mallow
<i>Eremalche parryi</i>	Parry's mallow
Myrtaceae - Myrtle family	
* <i>Eucalyptus</i> sp.	eucalyptus
Orobanchaceae – Broom-Rape family	
<i>Castilleja exserta</i>	purple owl's clover
Papaveraceae - Poppy family	
<i>Papaver heterophyllum</i>	wind poppy
Solanaceae - Nightshade family	
<i>Datura wrightii</i>	jimsonweed

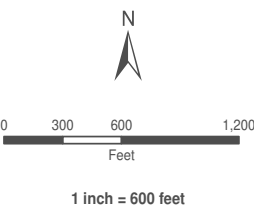
Legend:

* Non-native or invasive species

Source: Appendix D



-  Project Site
-  Off-Site Stockpiles
-  *Atriplex polycarpa* (Allscale Scrub) Shrubland Alliance
-  *Bromus* sp. – *Hordeum* sp. Herbaceous Semi-Natural Grassland
-  Disturbed/Developed



SOURCE: Glen Lukos Associates, Inc. 2021

2023

DUDEK

FIGURE 4.4-1
Vegetation Impact Map
 Clean Harbors

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***Atriplex polycarpa* (Allscale Scrub) Shrubland Alliance**

Approximately 143.24 acres of the project site located east of the existing solid waste Facility are vegetated with the *Atriplex polycarpa* shrubland alliance. The *Atriplex polycarpa* shrubland alliance has a G4 S4 rarity ranking, meaning that this vegetation type is apparently secure in both its global and California range. The membership rules for the allscale scrub shrubland alliance include the following: (1) *Atriplex polycarpa* represents greater than two percent absolute cover in the shrub canopy; and (2) *Atriplex polycarpa* represents greater than fifty percent relative cover in the shrub canopy. Within the subject areas of vegetation, relative cover of California sagebrush within the shrub canopy ranges between approximately 50 and 70 percent. Shrub height varies between roughly 1-2 meters and the shrub canopy is open to continuous. The herbaceous layer is variable and includes numerous seasonal annuals. Sub-dominant shrub species include big saltbush (*Atriplex lentiformis*) and non-native Russian thistle (*Salsola tragus*).

***Bromus sp. – Hordeum sp.* Herbaceous Semi-Natural Grassland**

Approximately 85.70 acres of the project site located east of the existing solid waste Facility are vegetated with the *Bromus sp. – Hordeum sp.* Herbaceous Semi-Natural grassland. The *Bromus sp. – Hordeum sp.* semi-natural grassland is dominated by non-native, annual species and therefore does not possess a rarity ranking. The *Bromus sp. – Hordeum sp.* semi-natural grassland is characterized by the following: (1) *Bromus sp.* represents greater than sixty percent relative cover in the herbaceous layer; or (2) *Hordeum sp.* represents greater than sixty percent relative cover in the herbaceous layer, with *Bromus sp.* present or lacking. Within the subject areas of vegetation, relative cover of *Bromus sp.* and/or *Hordeum sp.* ranges between approximately 60 - 80 percent. The herbaceous layer within subject areas of vegetation is generally open and interspersed regularly by patches of bare, unvegetated soil. The remaining 20 – 40 percent relative cover within the herbaceous layer is comprised of numerous annual species, with the most prevalent being common fiddleneck (*Amsinckia menziesii* var. *intermedia*), coastal goldfields (*Lasthenia gracilis*), and lacy phacelia (*Phacelia tanacetifolia*).

Disturbed/Developed

Approximately 326.28 acres of the project site are comprised of disturbed and/or developed areas. These areas are characterized by a general lack of vegetation due to regular intervals of disturbance or maintenance and soil compaction. The majority of developed areas within the project site occur within the active solid waste/hazardous waste Facility. East of the Facility disturbed/developed areas consist primarily of existing access roads, some of which are regularly maintained and others that remain disturbed (unvegetated) due to irregular use and/or high levels of soil compaction.

Wildlife Species

A total of 33 species, including reptiles, birds, and mammals were recorded for the site. A complete list of species observed during project surveys is provided in Appendix B of the BTR. A full copy of the BTR is provided in Appendix D of this EIR.

Special-Status Species

Special-status species are defined as those plants and wildlife that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or local agencies as being under threat from development pressures as well as natural causes. Some of these species

receive specific protection that is defined by the Federal or State Endangered Species Acts. Other species have been designated as special-status on the basis of adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities and/or special districts to meet local conservation objectives. Special-status species include the following:

- Species listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA).
- Species that meet the definitions of rare or endangered under *California Environmental Quality Act (CEQA) Guidelines* Section 15380.
- All of the plants constituting California Rare Plant Rank (CRPR) 1B and Rank 2B meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act [NPPA]) or Sections 2062 and 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. Many CRPR 4 species do not meet the definitions of special-status plants but may be significant locally and are recommended for consideration under CEQA (CNPS 2001).
- Wildlife designated by the CDFW as “species of special concern” or “special animals.”
- Wildlife “fully protected” in California (Fish and Game Code Sections 3511, 4700, and 5050).
- Wildlife species protected as “fur-bearing mammals” (Fish and Game Code Section 4000 *et seq.*).
- Native desert plants protected under the California Desert Native Plant Protection Act (California Food and Agriculture Code, Sections 80001-80006, Division 23).
- Species and open lands that are identified in the Kern County General Plan.

A complete list of special-status plant and wildlife species that have the potential to occur on the project site is provided in **Table 4.4-3, *Special-Status Plant Species with the Potential to Occur on the Project Site***, and **Table 4.4-4, *Special-Status Wildlife Species with the Potential to Occur on the Project Site***, which summarize the special-status plant and wildlife species, respectively, that were evaluated for their potential to occur within the project site. Species with no potential (not expected to occur) to occur on the project site were excluded from further analysis. The “Potential to Occur” categories indicated in Table 4.4-3 and Table 4.4-4 are defined as follows:

- **Does not occur:** The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- **Absent:** The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.
- **Not expected to occur:** The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.
- **Potential to occur:** The species has a potential to occur onsite based on suitable habitat, however its presence/absence could not be confirmed.
- **Present:** The species was detected onsite incidentally or through focused surveys.

Special-Status Plants

Twenty-seven special-status plant species were identified in the literature review and database search as having potential to occur at the project site. Table 4.4-3 identifies the regulatory status and habitat requirements for each plant species that has some potential to occur as well as the potential for the species to occur on the project site based on focused survey results and the presence or absence of suitable habitat. Species were evaluated based on the following factors: 1) species identified by the CNDDDB and CNPS as occurring (either currently or historically) on or in the vicinity of the project site, and 2) any other special-status plants that are known to occur within the vicinity of the project site, or for which potentially suitable habitat occurs within the site.

One special-status plant species was detected at the project site: the federally listed as endangered and CNPS Rank 1B.2 Kern mallow (*Eremalche parryi kernensis*). The Kern mallow (*Eremalche parryi ssp. kernensis*) was observed at three locations within the northernmost proposed stockpile area, east of the existing Facility. Each mapped location consists of between three and five individual plants (totaling approximately 12 individuals) that occur along the margins of allscale scrub and bare ground along with a suite of other, native annual species including coastal goldfields (*Lasthenia gracilis*), white layia (*Layia glandulosa*), devil's lettuce (*Amsinckia tesellata*), lacy phacelia (*Phacelia tanacetifolia*), purple owl's clover (*Castilleja exserta*), white mallow (*Eremalche exilis*), and Parry's mallow (*Eremalche parryi*).

TABLE 4.4-3: SPECIAL-STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR ON THE PROJECT SITE

Scientific Name	Common Name	Federal Status ^a	State Status ^b	CRPR ^c	Habitat Requirements	Occurrence
<i>Puccinellia simplex</i>	California alkali grass	None	None	1B.2	Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools.	Does not occur on site.
<i>Caulanthus californicus</i>	California jewelflower	FE	SE	1B.1	Sandy soils in chenopod scrub, pinyon and juniper woodland or valley and foothill grassland.	Absent.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	None	None	1B.1	Playas, vernal pools, marshes and swamps (coastal salt).	Absent.
<i>Atriplex coronata</i> var. <i>coronata</i>	Crownscale	None	None	4.2	Alkaline soils in chenopod scrub, valley and foothill grassland, vernal pools.	Absent.
<i>Atriplex cordulata</i> var. <i>erecticaulis</i>	Earlimart orache	None	None	1B.2	Alkaline soils in chenopod scrub, valley and foothill grassland, vernal pools.	Absent.
<i>Lasthenia ferrisiae</i>	Ferris' goldfields	None	None	4.2	Alkaline, clay soils in vernal pools.	Does not occur on site.
<i>Atriplex cordulata</i> var. <i>cordulata</i>	Heartscale	None	None	1B.2	Alkaline soils in chenopod scrub, valley and foothill grassland, vernal pools.	Absent.
<i>Eriastrum hooveri</i>	Hoover's eriastrum	None (delisted 2003)	None	4.2	Sometime gravelly soil. Chenopod scrub, Pinyon and juniper woodland, Valley and foothill grassland.	Absent.
<i>Astragalus hornii</i> var. <i>hornii</i>	Horn's milk-vetch	None	None	1B.1	Lake margins with alkaline soils, meadows and seeps, and playas.	Does not occur on site.
<i>Clarkia xantiana</i> ssp. <i>parviflora</i>	Kern Canyon clarkia	None	None	4.2	Often in sandy, sometimes rocky soils on slopes, sometimes on roadsides. Chaparral, cismontane woodland, Great Basin scrub, valley and foothill grassland.	Does not occur on site.

TABLE 4.4-3: SPECIAL-STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR ON THE PROJECT SITE

Scientific Name	Common Name	Federal Status ^a	State Status ^b	CRPR ^c	Habitat Requirements	Occurrence
<i>Eremalche parryi</i> <i>ssp. kernensis</i>	Kern mallow	FE	None	1B.2	Dry, open sandy to clay soils, often at the edge of bare areas in chenopod scrub, pinyon and juniper woodland or valley and foothill grassland.	Present. Occurs on site at numerous locations within northernmost proposed stockpile area east of the solid waste Facility.
<i>Caulanthus lemmonii</i>	Lemmon’s jewelflower	None	None	1B.2	Pinyon and juniper woodland and valley and foothill grassland.	Absent.
<i>Atriplex minuscula</i>	Lesser saltscale	FE	None	1B.1	Alkaline, sandy soils in chenopod scrub, playas, or valley and foothill grassland.	Absent.
<i>Atriplex coronata</i> <i>var. vallicola</i>	Lost Hills crownscale	None	None	1B.2	Alkaline soils in chenopod scrub, valley and foothill grassland and vernal pools.	Absent.
<i>Layia munzii</i>	Munz’s tidy-tips	None	None	1B.2	Alkaline clay soils in chenopod scrub or valley and foothill grassland.	Absent.
<i>Stylocline citroleum</i>	Oil neststraw	None	None	1B.1	Clay soils in chenopod scrub, coastal scrub, and valley and foothill grassland.	Absent.
<i>Layia heterotricha</i>	Pale-yellow layia	None	None	1B.1	Alkaline or clay soils in cismontane woodland, coastal scrub, pinyon and juniper woodland, and valley and foothill grassland.	Absent.
<i>Eriogonum nudum</i> var. <i>indictum</i>	Protruding buckwheat	None	None	4.2	Clay, serpentine soils in chaparral, chenopod scrub or cismontane woodland.	Absent.
<i>Delphinium recurvatum</i>	Recurved larkspur	None	None	1B.2	Alkaline soils in chenopod scrub, cismontane woodland or valley and foothill grassland.	Absent.
<i>Trichostema ovatum</i>	San Joaquin blue curls	None	None	4.2	Chenopod scrub or valley and foothill grassland.	Absent.
<i>Monolopia congdonii</i>	San Joaquin woollythreads	FE	None	1B.2	Sandy soils in chenopod scrub or valley and foothill grassland.	Absent.

TABLE 4.4-3: SPECIAL-STATUS PLANT SPECIES WITH THE POTENTIAL TO OCCUR ON THE PROJECT SITE

Scientific Name	Common Name	Federal Status ^a	State Status ^b	CRPR ^c	Habitat Requirements	Occurrence
<i>Madia radiata</i>	Showy golden madia	None	None	1B.1	Cismontane woodland or valley and foothill grassland.	Absent.
<i>Cirsium crassicaule</i>	Slough thistle	None	None	1B.1	Chenopod scrub, marshes and swamps, or riparian scrub.	Does not occur on site.
<i>Atriplex subtilis</i>	Subtle orache	None	None	1B.2	Alkaline soils in valley and foothill grassland.	Absent.
<i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>	Tejon poppy	None	None	1B.1	Chenopod scrub or valley and foothill grassland.	Absent.
<i>Eriogonum temblorense</i>	Temblor buckwheat	None	None	1B.2	Clay or sandstone-derived soils in valley and foothill grassland.	Absent.
<i>Canbya candida</i>	White pygmy-poppy	None	None	4.2	Gravelly, sandy, granitic soils in Joshua tree woodland, Mojavean desert scrub or pinyon and juniper woodland.	Absent.

^a Description of Federal Codes: FE = Federally endangered.

^b Description of State Codes: SE = State endangered.

^c Description of CRPR Codes:

Rank 1A – Plants presumed extirpated in California and either rare or extinct elsewhere.

Rank 1B – Plants rare, threatened, or endangered in California and elsewhere.

Rank 2A – Plants presumed extirpated in California, but common elsewhere.

Rank 2B – Plants rare, threatened, or endangered in California, but more common elsewhere

Rank 3 – Plants about which more information is needed (a review list).

Rank 4 – Plants of limited distribution (a watch list).

Threat Code extension:

.1 – Seriously endangered in California (over 80% occurrences threatened)

.2 – Fairly endangered in California (20-80% occurrences threatened)

.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Source: Appendix D

Special-Status Wildlife

Thirty-four special-status wildlife species were identified as having the potential to occur at the project site. The following special-status animals were detected at the project site: the state designated species of special concern, loggerhead shrike (*Lanius ludovicianus*); the state listed as threatened Swainson's hawk (*Buteo swainsoni*); the federally and state listed as endangered giant kangaroo rat (*Dipodomys ingens*); and the state listed as threatened San Joaquin antelope ground squirrel (*Ammospermophilus nelsoni*). Table 4.4-4 provides a list of special-status animals evaluated for the project site through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors, including: 1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the project site, and 2) any other special-status animals that are known to occur within the vicinity of the project site, for which potentially suitable habitat occurs on the site.

TABLE 4.4-4: SPECIAL-STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR ON THE PROJECT SITE

Scientific Name	Common Name	Federal Status ^a	State Status ^b	Habitat Requirements	Potential to Occur
Invertebrates					
<i>Bombus crotchii</i>	Crotch bumble bee	None	SE (candidate)	Relatively warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert.	Not expected to occur on site due to a lack of suitable habitat.
Amphibians					
<i>Anaxyrus californicus</i>	Arroyo toad	FE	SSC	Breed, forage, and/or aestivate in aquatic habitats, riparian, coastal sage scrub, oak, and chaparral habitats. Breeding pools must be open and shallow with minimal current, and with a sand or pea gravel substrate overlain with sand or flocculent silt. Adjacent banks with sandy or gravelly terraces and very little herbaceous cover for adult and juvenile foraging areas, within a moderate riparian canopy of cottonwood, willow, or oak.	Does not occur on site due to a lack of suitable habitat.
<i>Spea hammondi</i>	Western spadefoot	None	SSC	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	Does not occur on site due to a lack of suitable habitat.
Reptiles					
<i>Gambelia sila</i>	Blunt-nosed leopard lizard	FE	SE, CFP	Semiarid grasslands, alkali flats, and washes. Prefers flat areas with open space for running, avoiding densely vegetated areas.	Assumed present. Has the potential to occur on site within areas outside of the solid waste Facility.
<i>Arizona elegans occidentalis</i>	California glossy snake	None	SSC	Inhabits arid scrub, rocky washes, grasslands, Chaparral.	Has the potential to occur on site within areas outside of the solid waste Facility.
<i>Anniella</i> sp	California legless lizard	None	SSC	Common in several habitats but especially in coastal dune, valleyfoothill, chaparral, and coastal scrub types.	Not expected to occur due to a lack of suitable habitat.
<i>Phrynosoma blainvillii</i>	Coast Horned Lizard	None	SSC	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Has the potential to occur on site within areas outside of the solid waste Facility.

TABLE 4.4-4: SPECIAL-STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR ON THE PROJECT SITE

Scientific Name	Common Name	Federal Status ^a	State Status ^b	Habitat Requirements	Potential to Occur
<i>Thamnophis gigas</i>	Giant gartersnake	FT	ST	Occurs in marshes, sloughs, drainage canals, irrigation ditches and slow-moving creeks. Utilizes vegetated banks for basking.	Does not occur on site due to a lack of suitable habitat.
<i>Masticophis flagellum ruddocki</i>	San Joaquin coachwhip	None	SSC	Occurs in open, dry, treeless areas with little or no cover, including valley grassland and saltbush scrub. Utilizes rodent burrows, shaded areas under vegetation and objects on the surface for refuge.	Has the potential to occur on site within areas outside of the solid waste Facility.
<i>Anniella alexanderae</i>	Temblor legless lizard	None	SSC	Occurs in moist warm loose soil with plant cover. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Leaf litter under trees and bushes in sunny areas and dunes stabilized with bush lupine and mock heather often indicate suitable habitat.	Not expected to occur on site due to a lack of suitable habitat.
<i>Emys marmorata</i>	Western pond turtle	None	SSC	Slow-moving permanent or intermittent streams, and small bodies of water. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks.	Does not occur on site due to a lack of suitable habitat.
Birds					
<i>Athene cunicularia</i>	Burrowing owl (burrow sites & some wintering sites)	BCC	SSC	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Has the potential to occur on site.
<i>Aquila chrysaetos</i>	Golden Eagle (nesting & wintering)	BCC	WL, FP	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	Has potential to forage on site within areas outside of the solid waste Facility. No suitable nesting habitat occurs on site.

TABLE 4.4-4: SPECIAL-STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR ON THE PROJECT SITE

Scientific Name	Common Name	Federal Status ^a	State Status ^b	Habitat Requirements	Potential to Occur
<i>Toxostoma lecontei</i>	Le Conte's thrasher	BCC	SSC	Desert scrub, mesquite, tall riparian brush and, locally, chaparral.	Not observed on site, but observed within denser, taller stands of all-scale scrub east of the project site. Has potential to occur on site.
<i>Lanius ludovicianus</i>	Loggerhead shrike (nesting)	BCC	SSC	Forages over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs.	Present. Observed perched along the western perimeter of the solid waste Facility. Has potential to nest on site.
<i>Asio otus</i>	Long-eared owl (nesting)	None	SSC	Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.	Does not occur on site due to a lack of suitable habitat.
<i>Circus cyaneus</i>	Northern harrier (nesting)	None	SSC	A variety of habitats, including open wetlands, grasslands, wet pasture, old fields, dry uplands, and croplands.	Not observed but has potential to occur and nest on site within areas outside of the solid waste Facility.
<i>Asio flammeus</i>	Short-eared owl (nesting)	None	SSC	Open country, including prairie, meadows, tundra, moorlands, marshes, savanna, and open woodland. Nests on the ground.	Not expected to occur on site due to marginality of habitat.
<i>Buteo swainsoni</i>	Swainson's hawk (nesting)	BCC	ST	Summer in wide open spaces of the American West. Often nest in solitary trees in grasslands, but may also use sage flats and agricultural lands.	Present. Was observed perched within a eucalyptus tree near the entrance to the existing solid waste Facility. Has potential to nest within ornamental trees that line the perimeter of the solid waste Facility, and also in habitat adjacent to the project.
<i>Agelaius tricolor</i>	Tricolored blackbird (nesting colony)	BCC	CE, SSC	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	Does not nest on site due to a lack of suitable habitat. Not expected to forage onsite due to a lack of suitable nesting habitat nearby.

TABLE 4.4-4: SPECIAL-STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR ON THE PROJECT SITE

Scientific Name	Common Name	Federal Status ^a	State Status ^b	Habitat Requirements	Potential to Occur
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover (nesting)	FT, BCC	SSC	Sandy or gravelly beaches along the coast, estuarine salt ponds, alkali lakes, and at the Salton Sea.	Not expected to occur on site due to a lack of suitable habitat. Does not nest on site due to a lack of suitable habitat.
<i>Elanus leucurus</i>	White-tailed kite (nesting)	None	FP	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Dense canopies used for nesting and cover.	Not observed on site. Does not nest on site due to a lack of suitable habitat.
<i>Empidonax traillii</i>	Willow flycatcher (nesting)	BCC	SE	Breeds in moist, shrubby areas, often with standing or running water. Winters in shrubby clearings and early successional growth.	Not observed on site. Does not nest on site due to a lack of suitable habitat.
<i>Setophaga petechia</i>	Yellow warbler (nesting)	BCC	SSC	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	Not observed on site. Does not nest on site due to a lack of suitable habitat.
Mammals					
<i>Taxidea taxus</i>	American badger	None	SSC	Most abundant in drier open stages of most scrub, forest, and herbaceous habitats, with friable soils.	Not observed on site, not expected to occur due to marginality of habitat.
<i>Sorex ornatus relictus</i>	Buena Vista Lake ornate shrew	FE	SSC	Historically occupied wetland and riverine habitats in the southern Tulare Basin.	Does not occur on site due to a lack of suitable Habitat.
<i>Dipodomys ingens</i>	Giant kangaroo rat	FE	SE	Prefers grasslands on gentle slopes of generally less than ten degrees, with friable, sandy loam soils. Primarily seed eaters but also eat green plants and insects.	Present. Predated giant kangaroo rat remains were observed and numerous burrow systems are present on site within undeveloped areas outside the solid waste Facility.

TABLE 4.4-4: SPECIAL-STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR ON THE PROJECT SITE

Scientific Name	Common Name	Federal Status ^a	State Status ^b	Habitat Requirements	Potential to Occur
<i>Ammospermophilus nelson</i>	Nelson’s antelope ground squirrel	None	ST	Dry flat or rolling terrain with grassy, sparsely shrubby ground on alluvial and loamy soils with a sandy or gravelly texture.	Present. Occurs at numerous locations on site within areas outside of the solid waste Facility.
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	FE	ST	Grassland, scrubland and wetland communities in the San Joaquin Valley and adjacent foothills.	Not observed but known to occur within the vicinity of the project site. Has potential to occur on site.
<i>Dipodomys nitraoides brevinasus</i>	Short-nosed kangaroo rat	None	SSC	Friable soils on flat or gently rolling terrain in grassland or scrubland communities. Typically utilize slightly elevated areas for burrow placement.	Not observed but has potential to occur on site within areas outside of the solid waste Facility.
<i>Onychomys torridus ramona</i>	Southern grasshopper mouse	None	SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	Not observed but has potential to occur on site within areas outside of the solid waste Facility.
<i>Dipodomys nitraoides nitraoides</i>	Tipton kangaroo rat	FE	SE	Saltbush scrub, valley sink scrub and grassland communities on the San Joaquin Valley floor up to 300 feet in elevation. Occur on level to nearly level terrain with sandy to silty alluvial fan and floodplain soils with high salinity.	Has potential to occur on site within areas outside of solid waste Facility.
<i>Onychomys torridus tularensis</i>	Tulare grasshopper mouse	None	SSC	Inhabits low, open scrub and semi-scrub habitats. Prefers compact soils with a sparse growth of perennial grasses.	Has potential to occur on site within areas outside of solid waste Facility.
<i>Eumops perotis californicus</i>	Western mastiff bat	None	SSC (WBWG: H) ^c	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Has potential to forage on site. Has potential to roost on existing structures within the solid waste Facility.

^a Description of Federal Codes: BGEPA = Bald and Golden Eagle Protection Act, FE = Federally endangered, FT = Federally threatened, BCC = Bird of Conservation Concern

^b Description of State Codes: CE = Candidate Endangered, SE = State endangered, ST = State threatened, FP = California fully protected, SSC = California Species of Special Concern, WL = California Watch List Species.

^c Western Bat Working Group (WBWG) Status: H = High priority, LM = Low-medium priority, M – Medium priority, MH = Medium-high priority.

Source: Appendix D

Special-Status Wildlife Species Observed within the Project Site

Birds

Loggerhead Shrike (*Lanius ludovicianus*) - The loggerhead shrike is designated as a CDFW California Species of Special Concern when nesting. The species nests from southern Canada through the Great Basin and California, to Baja California, Mexico and the Gulf coast. Wintering grounds are found in the southern portion of the breeding range and further south into Mexico. In California, the species is found throughout the foothills and lowlands of California as a resident. Winter migrants are found coastally, north of Mendocino County.

The loggerhead shrike is known to forage over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs. Individuals like to perch on posts, utility lines and often use the edges of denser habitats. Breeding pairs typically settle near isolated trees or large shrubs.

An individual loggerhead shrike was observed perched on the perimeter fencing along the western edge of the solid waste Facility. Perches and suitable foraging habitat occur throughout the project site with the most suitable foraging habitat occurring within the allscale scrub and semi-natural grassland areas east of the solid waste Facility. Suitable nesting habitat occurs within the ornamental vegetation that lines the perimeter of the Facility, as well as within the allscale scrub that occurs on site and east of the solid waste Facility.

Swainson's Hawk (*Buteo swainsoni*) – The Swainson's hawk is designated as a state-listed threatened species. The Swainson's hawk occurs within western North America, including east-central Alaska, predominantly in the plains region of the United States and southern Canada. Within California, it is an uncommon breeding resident and migrant in the San Joaquin Valley, with very limited breeding reported from eastern San Luis Obispo. Within the San Joaquin Valley it typically nests in stands with few trees in riparian areas and in oak savannah. It forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures.

Typical habitat of the Swainson's hawk is open desert, sparse shrub lands, grassland, or cropland containing scattered, large trees or small groves. The species cannot forage in most perennial crops or in annual crops that grow much higher than native grasses, due to the increased difficulty of spotting prey. It roosts in large trees but will roost on the ground if trees are not available. It nests in scattered trees within these grassland, shrubland, or agricultural landscapes especially along stream courses or in open woodlands. As an example, in California's San Joaquin Valley, the nests are typically at the edge of a narrow band of riparian vegetation, in isolated oak woodland, and in lone trees, roadside trees, or farmyard trees, as well as in adjacent urban residential areas.

On April 19, 2019 a pair of Swainson's hawks was observed perched within ornamental trees near the entrance to the solid waste Facility. No nest was observed near their perch; however, the pair may have nested off site. Although no nesting was observed within the project site, the ornamental trees that line the southern perimeter of the solid waste Facility do provide suitable nesting habitat for Swainson's hawk, and the allscale scrub and semi-natural grassland habitats east of the solid waste Facility provide suitable foraging habitat for the species.

Mammals

Giant Kangaroo Rat (*Dipodomys ingens*) – Giant kangaroo rat is designated as a federal and state endangered species. The species' range now comprises merely 2% of its historic range and it can now be found only in isolated areas along the southwestern flank of the San Joaquin Valley including San Juan Creek Valley, Cuyama Valley, Carrizo Plain, Elkhorn Plain and Kettleman Hills. Habitat loss is largely attributed to agriculture within the San Joaquin Valley.

Habitat for the species consists of relatively level grassland habitats with minimal shrub cover and dry, sandy, friable soils. Giant kangaroo rats feed primarily on seeds of grasses and shrubs and are most active during the spring when forage is bountiful. The species digs circular burrow systems called precincts located at the center of their territories. A territory is occupied by a single adult giant kangaroo rat.

The remains of a predated giant kangaroo rat were observed along the northwestern perimeter of the project site. Additionally, numerous burrow precincts were observed east of the solid waste Facility within the allscale scrub and semi-natural grassland habitats; specifically, in areas where annual vegetation is dominant and shrubs are sparse. Large tracks and tail drag marks around precincts were indicative of giant kangaroo rat; however, occupation cannot be confirmed nor ruled out without focused trapping efforts.

Nelson's Antelope Squirrel (*Ammospermophilus nelsoni*) – Nelson's antelope squirrel is designated as a state threatened species. The range is restricted to the central and western San Joaquin Valley and neighboring areas to the west in the inner Coast Ranges of California. Elevational range extends from about 50 meters on the floor of the San Joaquin Valley to around 1,100 meters in the Temblor Range, but antelope squirrels are not common above about 800 meters.

Habitat for the Nelson's antelope squirrel consists of dry flat or rolling terrain, with slopes less than 10-14 degrees, on alluvial and loamy soils, soils with sandy or gravelly texture, or fine grained soils that are nearly brick-hard when dry. The species inhabits grassy, sparsely shrubby ground (shrubs include saltbush, ephedra, bladder pod, goldenbush, snakeweed, etc.); it also occurs in areas lacking shrubs where giant kangaroo rats are present. Habitats that are avoided included valley floor areas of alkaline soils, iodine bush, and spring saltbush, probably due to high water tables. These species seldom digs their own burrows; most often they use burrows made by other small mammals. Preferred burrow locations are under shrubs, in the banks of arroyos at the base of alluvial fans, and along roadcuts, pipelines, and drilling platforms.

Nelson's antelope ground squirrels were detected and observed at numerous locations along a dirt road that borders the eastern perimeter of the Facility. Four separate observations of Nelson's ground squirrel were made within the northernmost proposed stockpile location, and another observation was made adjacent to the southeastern corner of the solid waste Facility. Additionally, several Nelson's ground squirrel alarm calls were heard within the vicinity of the observed individuals. The allscale scrub and semi-natural grassland habitats east of the solid waste Facility represent suitable habitat for the species, as such, it is likely that more of the site and areas to the east are occupied than solely where the species was directly observed.

Special-Status Wildlife Species not Observed but with a Potential to Occur at the Project Site

Reptiles

Blunt-nosed Leopard Lizard (*Gambelia sila*) – Blunt-nosed leopard lizard is designated as a state and federal endangered species and a California Fully Protected species. The species is endemic to California and currently inhabits the San Joaquin Valley and adjacent valleys and foothills, from northeast Santa Barbara County and western Kern County northward to Merced County.

Blunt-nosed leopard lizards occupy semiarid grasslands, alkali flats and washes. Topographically, the species prefers relatively flat areas that are sparsely vegetated. Shrubs that are present are utilized for thermoregulatory purposes as well as for cover. The species does not dig its own burrows, rather, it uses mammal burrows for cover and shelter – the number of available burrows is often correlated with the size of the blunt-nosed leopard lizard’s population in an occupied area.

No blunt-nosed leopard lizards were observed at the project site; however, suitable habitat is present for the species, and it is known to occur within the vicinity of the project site. As such, the blunt-nosed leopard lizard is assumed present for the purpose of this analysis. Suitable habitat for the species occurs east of the Facility, within areas mapped as allscale scrub and seminatural grassland. Focused surveys for the species may be required as part of coordination with USFWS and CDFW to obtain take authorization.

California Glossy Snake (*Arizona elegans occidentalis*) – California glossy snake is designated as a CDFW California Species of Special Concern. Their range occurs from the eastern flank of the San Francisco Bay Area, south to northwestern Baja California. It is absent from the Central Coast but occurs along the western edge of the San Joaquin Valley and incorporates adjacent valleys and foothills. California glossy snakes occupy arid scrub, rocky washes, grasslands, and chaparral. They are most often associated with open areas that have friable soils for burrowing. No California glossy snakes were observed at the project site; however, suitable habitat is present for the species, and it is known to occur within the vicinity of the project site. Suitable habitat for the species occurs east of the Facility, within areas mapped as allscale scrub and seminatural grassland.

Coast (San Diego) Horned Lizard (*Phrynosoma blainvilli*) – The coast horned lizard is designated as a CDFW California Species of Special Concern. Historically, the species was distributed from the Transverse Ranges in Kern, Los Angeles, Santa Barbara, and Ventura counties southward through the Peninsular Ranges of Southern California to Baja California. Coast horned lizard is found in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous. In inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance. Extensive habitat loss from agriculture and urbanization have been the main reasons cited for the decline of this taxon.

No coast horned lizards were observed at the project site; however, suitable habitat and prey is present for the species, and it is known to occur within the vicinity of the project site. Suitable habitat for the species occurs east of the Facility, within areas mapped as allscale scrub and seminatural grassland.

San Joaquin Coachwhip (*Coluber flagellum ruddocki*) – San Joaquin coachwhip is designated as a CDFW California Species of Special Concern. The subspecies’ range spans from the Sacramento Valley in Colusa County southward to Kern County in the San Joaquin Valley and westward to the inner South Coast Ranges.

The species occupies arid, treeless, open areas with little or no vegetative cover, typically within valley grassland and saltbush scrub habitats. San Joaquin coachwhip typically avoids areas of dense vegetation where movement is restricted, such as chaparral or oak woodland. It often utilizes rodent burrows for refuge, and also takes cover under shaded vegetation or surface objects.

No San Joaquin coachwhips were observed at the project site; however, suitable habitat is present for the species, and it is known to occur within the vicinity of the project site. Suitable habitat for the species occurs east of the Facility, within areas mapped as allscale scrub and seminatural grassland.

Birds

Burrowing Owl (*Athene cunicularia hypugaea*) – The burrowing owl is designated as a CDFW California Species of Special Concern at burrow sites and some wintering sites. The burrowing owl is a year-long resident formerly common in appropriate habitats throughout California, excluding the humid northwest coastal forests and high mountains. In California, burrowing owls are restricted to the central valley extending from Redding south to the Grapevine, east through the Mojave Desert and west to San Jose, the San Francisco Bay area, the outer coastal foothills area which extend from Monterey south to San Diego and the Sonoran desert. It is a resident in the open areas of the lowlands over much of the Southern California region.

The burrowing owl occurs in shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a year-long resident. They may also use golf courses, cemeteries, road allowances within cities, airports, vacant lots in residential areas and university campuses, fairgrounds, abandoned buildings, and irrigation ditches. They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. One burrow is typically selected for use as the nest; however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl.

No burrowing owls were observed at the project site; however, suitable wintering and breeding habitat is present for the species, and it is known to occur within the vicinity of the project site. Suitable habitat for the species occurs east of the solid waste Facility, primarily within areas mapped as semi-natural grassland. Focused surveys for the species will be required to determine if areas of suitable habitat are occupied.

Golden Eagle (*Aquila chrysaetos*) – The golden eagle is designated as a California Fully Protected Species and is considered a sensitive species when nesting or wintering. The golden eagle has a holarctic distribution, extending as far south as north Africa, Arabia, and the Himalayas in the Old World, and Mexico in North America. Golden eagles in North America breed locally from northern Alaska eastward to Labrador southward to northern Baja California, northern Mexico, and Maine. The species winters from southern Alaska and southern Canada southward through the breeding range. Within California the golden eagle is described as an uncommon permanent resident and migrant throughout the state, except the center of the Central Valley. It may be more common in Southern California than in northern regions.

Range-wide, golden eagles occur locally in open country (e.g., tundra, open coniferous forest, desert, barren areas), especially in hills and mountainous regions. Within Southern California, the species prefers grasslands, brushlands (coastal sage scrub and sparse chaparral), deserts, oak savannas, open coniferous forests, and montane valleys. It uses rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops. The species requires a large expanse for foraging and suitable nest sites in the form of cliffs or large trees. Secluded cliffs with overhanging ledges and large trees are used for cover. Thus, the golden eagle uses a variety of habitats,

nesting in cliffs or trees and rugged terrain and foraging over plains, grasslands, or low and open shrublands including chaparral and coastal sage scrub. Golden eagles typically are not found in heavily forested areas or on the immediate coast and are almost never detected in urbanized environments.

No golden eagles were observed at the project site, additionally, no suitable nesting habitat occurs for the species within or adjacent to the project site. However, suitable foraging habitat is present for the species, and the species is known to occur within the vicinity of the project site. Suitable foraging habitat for the species occurs east of the solid waste Facility, within areas mapped as allscale scrub and semi-natural grassland.

LeConte's Thrasher (*Toxostoma lecontei*) – LeConte's thrasher is designated as a CDFW California Species of Special Concern. Their range within in California includes the southwestern San Joaquin Valley, Mojave Desert, and the lower Sonoran Desert of southeastern California. Large areas within this range are unoccupied.

LeConte's thrasher habitat consists of sparsely vegetated desert flats, dunes, alluvial fans, or gently rolling hills having high proportion of one or more species of saltbush or shadscale (*Atriplex* spp.) and/or cylindrical cholla cactus (*Opuntia* spp.). Within preferred habitat the majority of shrubs rarely exceed 2.5 meters in height. Accumulated leaf litter under most plants are important as diurnal cover for most arthropod prey. Nests are typically placed in shaded locations in thick, dense, and thorny desert shrubs or small trees or cholla cactus, sometimes in artificial sites, up to 3.5 meters above ground.

LeConte's thrasher was observed approximately 2,000 feet north of the project site, adjacent to the California Aqueduct. A single bird was observed calling and utilizing an area of mature allscale scrub with significantly taller shrub heights than present on the project site. While offsite habitat is better suited for the species, it still has the potential to forage on site; specifically, within the allscale scrub present east of the solid waste Facility.

Northern Harrier (*Circus cyaneus*) - The northern harrier is designated as a CDFW California Species of Special Concern when nesting. The northern harrier occurs as a breeding bird across the northern United States and Canada, throughout most of California and the central portion of the United States south to Texas. In California, the northern harrier occurs from annual grassland up to lodgepole pine and alpine meadow habitats, as high as 3,000 meters (10,000 feet). It breeds from sea level to 1,700 meters (0-5,700 feet) in the Central Valley and Sierra Nevada, and up to 800 meters (3,600 feet) in northeastern California. It is a permanent resident of the northeastern plateau and coastal areas; it is a less common resident of the Central Valley. It is a widespread winter resident and migrant in suitable habitat.

The northern harrier frequents open wetlands, wet and lightly grazed pastures, old fields, dry uplands, upland prairies, mesic grasslands, drained marshlands, croplands, shrub-steppe, meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands and is seldom found in wooded areas. It uses tall grasses and forbs in wetlands, or at wetland/field borders for cover, and roosts on the ground. While it seems to prefer to nest in the vicinity of marshes, rivers, or ponds, it may be found nesting in grassy valleys or on grass and sagebrush flats many miles from the nearest water. In general, it prefers saltwater marshes, wet meadows, sloughs, and bogs for its nesting and foraging habitat and if these are absent, it hunts open fields and is frequently observed hunting over agricultural areas. In both wetland and upland areas, the densest populations typically are associated with large tracts of undisturbed habitats dominated by thick vegetative growth.

No northern harriers were observed at the project site; however, suitable foraging and nesting habitat is present for the species, and it is known to occur within the vicinity of the project site. Suitable habitat for the species occurs east of the solid waste Facility, within areas mapped as allscale scrub and semi-natural grassland.

Mammals

San Joaquin Kit Fox (*Vulpes macrotus mutica*) – San Joaquin kit fox is designated as a state threatened species and a federal endangered species. Historically the San Joaquin kit fox inhabited the entirety of the San Joaquin Valley in central California, as well as the foothills and lowlands of the eastern Coast Ranges in the state. Currently, San Joaquin kit fox populations are limited to the west side of the San Joaquin Valley, including the Carrizo Plain, Cuyama Valley and on the eastern slopes of the La Panza Range in eastern San Luis Obispo County. Remaining populations are highly fragmented with the largest core populations occurring in western Kern County and in the Carrizo Plain.

San Joaquin kit foxes are known to utilize a variety of open habitat types including grassland, scrubland, marshes and meadows. They are active primarily at night and feed on kangaroo rats and other small rodents and prey items such as ground squirrels, mice, birds and insects. As omnivores they also feed heavily on grasses and annual forbs.

No San Joaquin kit foxes (including burrows for denning) were observed at the project site; however, suitable habitat, forage and prey is present for the species, and it is known to occur within the immediate vicinity of the project site. Suitable habitat for the species occurs east of the solid waste Facility, within areas mapped as allscale scrub and semi-natural grassland. Focused surveys for the species will be required to determine if areas of suitable habitat are occupied.

Short-nosed Kangaroo Rat (*Dipodomys nitraoides brevinasus*) – Short-nosed kangaroo rat is designated as a CDFW California Species of Special Concern. The short-nosed kangaroo rat occurred historically on the western, southern, and extreme southeastern side of the San Joaquin Valley, most typically above the valley floor where burrowing tends to be inhibited by high water tables. Its range extended as far north as Panoche Creek in western Fresno County, southward to San Emigdio Creek in southwestern Kern County, and northeastward to the northeast of Bakersfield. It also occurs in the Cuyama Valley and the Carrizo Plain in San Luis Obispo and Santa Barbara Counties.

Short-nosed kangaroo rats occupy areas with friable soils on flat or gently rolling terrain in grassland and/or scrubland habitats. When shrubs are present, they are typically scrub communities dominated by *Atriplex* sp. and/or *Ephedra californica*. Burrows are located in friable soils and are often associated with slightly elevated areas to reduce the likelihood of seasonal flooding. Such raised areas may be man-made and may include road berms, canal embankments, railroad beds, or wind-blown soils against a fence or a shrub.

No short-nosed kangaroo rats were observed at the project site; however, suitable habitat is present for the species, and it is known to occur within the vicinity of the project site. Suitable habitat for the species occurs east of the solid waste Facility, within areas mapped as allscale scrub and seminatural grassland.

Southern Grasshopper Mouse (*Onychomys torridus Ramona*) - The southern grasshopper mouse is designated as a CDFW Species of Special Concern. The southern grasshopper mouse ranges from central California, southern Nevada, and extreme southwestern Utah south to northern Baja California, western Sonora, and northernmost Sinaloa, Mexico. The southern grasshopper mouse is found in hot, arid valleys and scrub deserts of the Lower Sonoran life zone, that are characterized by sparse and scattered vegetation

such as mesquite, huisache, creosote bush, cholla, yucca, and various short grasses. The southern grasshopper mouse is also found in blackbush zones on alluvial fans. The species often occupies burrows manufactured by other fossorial mammal species.

No southern grasshopper mice were observed at the project site; however, suitable habitat is present for the species, and it is known to occur within the vicinity of the project site. Suitable habitat for the species occurs east of the solid waste Facility, within areas mapped as allscale scrub and seminatural grassland.

Tipton Kangaroo Rat (*Dipodomys nitraoides nitraoides*) – The Tipton kangaroo rat is designated a state endangered species and federal endangered species. Historically, Tipton kangaroo rats were distributed throughout the southern San Joaquin Valley. To the north, their range extended to Tulare Lake, and southward to the eastern edge of the San Joaquin Valley floor in Tulare and Kern County. They also occurred in the San Joaquin Valley along the foothills of the Tehachapi Mountains. Tipton kangaroo rats inhabit areas of valley saltbush scrub, valley sink scrub and grassland along the San Joaquin Valley floor and up to elevations of 90 meters (300 feet). They typically prefer level to nearly level terrain characterized by alluvial fan and floodplain soils that range from fine sand to clay-sized particles with high salinity. Sparse to moderate shrub cover is preferred by the species, however, they do occupy terrace grassland habitats with little to no shrub cover.

No Tipton kangaroo rats were observed at the project site; however, suitable habitat is present for the species, and it is known to occur within the vicinity of the project site. Suitable habitat for the species occurs east of the solid waste Facility, within areas mapped as allscale scrub and semi-natural grassland. Focused surveys for the species will be required to determine if areas of suitable habitat are occupied.

Tulare Grasshopper Mouse (*Onychomys torridus tularensis*) – The Tulare grasshopper mouse is designated as a CDFW Species of Special Concern. The historic range for the species extended along the floor and foothills of the southern San Joaquin Valley from western Merced and eastern San Benito Counties, east to Madera County, and south to the foothills of the Tehachapi and San Emigdio Mountains. The species also inhabits the Carrizo Plain in San Luis Obispo County; Cuyama Valley, Caliente Creek Wash, Weldon Valley, and Kelso Valley in Kern County; and the Tulare Basin and Panoche Valley. Tulare grasshopper mouse inhabit low, open scrub habitats in arid, Lower Sonoran associations and tend to associate with compact soils and sparsely growing perennial grasses.

No Tulare grasshopper mice were observed at the project site; however, suitable habitat is present for the species, and it is known to occur within the vicinity of the project site. Suitable habitat for the species occurs east of the solid waste Facility, within areas mapped as allscale scrub and seminatural grassland.

Western Mastiff Bat (*Eumops perotis californicus*) – The western mastiff bat is designated as a CDFW Species of Special Concern and WBWG high priority. The western mastiff bat ranges from central California southeastward to southern Nevada, central Arizona, and west Texas, and south through northern Baja California, northern Sinaloa, and Zacatecas. The western mastiff bat is apparently a permanent resident in the U.S. The western mastiff bat is found in arid and semiarid, rocky canyon country habitats in the Chihuahuan Desert; roosts in crevices and shallow caves on the sides of cliffs and rock walls, and occasionally buildings. The species typically roosts high above the ground with an unobstructed approach.

No western mastiff bats were observed at the project site; however, suitable foraging habitat is present for the species, and it is known to occur within the vicinity of the project site. Suitable foraging habitat for the species occurs throughout the solid waste Facility and also within areas east of the solid waste Facility mapped as allscale scrub and semi-natural grassland.

Sensitive Natural Communities

Sensitive habitats and vegetation communities are those that are considered rare in the region, support special-status plant or animal species, or receive regulatory protection, including those that are of special concern to resource agencies or are afforded specific consideration through CEQA. In addition, vegetation communities listed by CDFW as having the highest inventory priorities are considered sensitive. No sensitive natural communities are found within or adjacent to the project site.

Critical Habitat

USFWS has not designated or proposed any critical habitats on or near the project site under the FESA (16 USC 1533 (a)(3)). Critical habitat is designated for the survival and recovery of federally listed endangered and/or threatened species. Protected habitat includes areas for foraging, breeding, roosting, shelter, and movement or migration. The USFWS has not designated any critical habitat within the project site or immediately adjacent to the project site.

Raptor Use

The project site provides suitable foraging and breeding habitat for a number of raptor species, including special-status raptors such as the state listed as endangered Swainson's hawk. Southern California holds a diversity of birds of prey (raptors), and many of these species are in decline. For most of the declining species, foraging requirements include extensive open, undisturbed, or lightly disturbed areas, especially grasslands. This type of habitat has declined severely in the region, affecting many species, but especially raptors. A few species, such as Red-tailed Hawk (*Buteo jamaicensis*) and American Kestrel (*Falco sparverius*), are somewhat adaptable to low-level human disturbance and can be readily observed adjacent to neighborhoods and other types of development. These species still require appropriate foraging habitat and low levels of disturbance in vicinity of nesting sites.

Undeveloped areas mapped as herbaceous semi-natural grassland and allscale scrub (east of the solid waste Facility) comprise suitable raptor foraging habitat and support a suite of potential mammal, reptile, and insect prey species. Within the project site approximately 143.24 acres of allscale scrub and approximately 85.70 acres of herbaceous semi-natural grassland represent suitable foraging habitat for various raptor species. Additionally, various ornamental trees that occur along the margins of the solid waste Facility have the potential to support nesting raptor species.

Nesting Birds

The project site contains trees, shrubs, and ground cover that provide suitable habitat for nesting migratory birds. Impacts to nesting birds are prohibited under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code.

Wildlife Linkages/Movement Corridors and Nursery Sites

Habitat linkages are areas which provide a communication between two or more other habitat areas which are often larger or superior in quality to the linkage. Such linkage sites can be quite small or constricted, but may can be vital to the long-term health of connected habitats. Linkage values are often addressed in

terms of “gene flow” between populations, with movement taking potentially many generations. Given that the project site is surrounded by adjacent agriculture to the north and west, extensive oil extraction activities to the south, and the California Aqueduct and agriculture to the east, the project site does not function as a critical habitat linkage.

Corridors are similar to linkages but provide specific opportunities for individual animals to disperse or migrate between areas, generally extensive but otherwise partially or wholly separated regions. Adequate cover and tolerably low levels of disturbance are common requirements for corridors. Habitat in corridors may be quite different than that in the connected areas, but if used by the wildlife species of interest, the corridor will still function as desired. Given that the project site is surrounded by adjacent agriculture to the north and west, extensive oil extraction activities to the south, and the California Aqueduct and agriculture to the east, the project site does not function as a wildlife corridor.

Wildlife nurseries are sites where wildlife concentrate for hatching and/or raising young, such as rookeries, spawning areas, and bat colonies. Nurseries can be important to both special-status species as well as commonly occurring species. The project site does not have the potential to support any wildlife nurseries.

Jurisdictional Waters

Jurisdictional waters include aquatic resources such as streams, creeks, lakes, riparian areas, wetlands, and certain aquatic vegetation communities, which are considered sensitive biological resources and can fall under the jurisdiction of federal and/or state regulatory agencies including the U.S. Army Corps of Engineers (USACE), CDFW, and/or Regional Water Quality Control Board (RWQCB). The definitions of the extent of regulatory agency jurisdictions are described in the Regulatory Setting below (Subsection 4.4.3).

CDFW exercises jurisdiction over wetlands and riparian resources associated with rivers, streams, lakes, ephemeral streams, desert washes and other watercourses that demonstrate surface or subsurface flows under Sections 1600 *et seq.* of the California Fish and Game Code (CFG). CDFW has the authority to regulate projects that would substantially divert, obstruct, or change the natural flow of a river, stream, lake, or ephemeral drainage; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed. CDFW’s jurisdiction along a river, stream, creek, ephemeral drainage, or other water body is usually bounded by the top-of-bank or the outermost edges of riparian vegetation.

Two relic drainage features, Drainages A and B, and their associated tributaries bisect the eastern portion of the project site, from southwest to northeast. Lokern Road and the existing Clean Harbors Facility hydrologically isolate the project site such that the features on site effectively do not have an upstream watershed, only receive runoff from local precipitation, and no longer convey concentrated flows or exhibit hydrological indicators. Additionally, unconcentrated flows that originate on site flow toward the northeast, beneath the California Aqueduct via an at-grade crossing and are then impounded into an unnamed reservoir by a series of levees approximately one mile northeast of the project site. Therefore, flows originating on site do not reach the downstream Kern River Flood Canal, and are considered isolated. Being that Drainage A, Drainage B, and their associated tributaries are effectively isolated as described above and do not exhibit an ordinary high-water mark (OWHM) (defined in 33 C.F.R. §328.3 as the line on the shore established by fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, or the presence of litter and debris), and that there are no jurisdictional wetlands present, there is no Corps jurisdiction associated with the project site. RWQCB jurisdiction associated with the project site occurs south of the proposed stockpile area and totals approximately 3.77 acres and 8,005 linear feet, none of which consists

of jurisdictional wetlands (see **Figure 4.4-2, RWQCB Non-wetland Waters**). CDFW jurisdiction associated with the project site occurs south of the proposed stockpile area and totals approximately 8.27 acres and 8,005 linear feet, none of which consists of CDFW jurisdictional riparian resources (see **Figure 4.4-3, CDFW Non-riparian Streambed**).

USACE Jurisdiction

Lokern Road and the existing Clean Harbors Facility hydrologically isolate Drainages A and B associated tributaries within the project site from the upstream watershed, such that the features on site no longer convey concentrated flows or exhibit hydrological indicators. Additionally, unconcentrated flows that originate on site are impounded by an unnamed reservoir and do not reach the Kern River Flood Canal, as described above. As a result, there are no waters of the United States associated with the project site, as to be confirmed through the processing of an Approved Jurisdictional Determination through coordination with the Corps.

RWQCB Jurisdiction

RWQCB jurisdiction associated with the project site occurs south of the proposed stockpile area and totals approximately 3.77 acres and 8,005 linear feet, none of which consists of jurisdictional wetlands as shown in Table 4.4-5 *RWQCB Jurisdiction*.

TABLE 4.4-5: RWQCB JURISDICTION

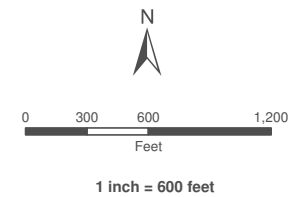
Non-Wetland		
Drainage Features	Potentially Jurisdiction (acres)	Linear Feet of Streambed
Drainage A	1.37	2,685
Tributary A1	0.51	1,333
Tributary A2	0.97	1,749
Tributary A3	0.49	1,100
Tributary B	0.45	1,138
Total	3.77	8,005

Drainage A Drainage A is a relic drainage feature that has become effectively isolated from upstream flows by the construction of Lokern Road and the existing solid waste Facility. Drainage A once conveyed flows from south to north and occurs adjacent to the southern limit of the proposed stockpile areas. Drainage A is sparsely vegetated by upland annual and perennial plant species such as allscale (*Atriplex polycarpa*), spiny saltbush (*Atriplex confertifolia*), Russian thistle (*Salsola tragus*), common fiddleneck (*Amsinckia menziesii* var. *intermedia*), horehound (*Marrubium vulgare*), soft chess (*Bromus hordeaceus*) and ripgut brome (*Bromus diandrus*). RWQCB jurisdiction associated with Drainage A occurs entirely outside of the project footprint and comprises approximately 1.37 acres and 2,685 linear feet, none of which consists of jurisdictional wetlands (Figure 4.4-2).

Kern County Planning and Natural Resources Department
Clean Harbors, WMU
By: Clean Harbors Buttonwillow, LLC



- Site Boundary
- Project Footprint
- RWQCB Non-Wetland Waters



SOURCE: Glen Lukos Associates, Inc. 2020
2022

DUDEK

FIGURE 4.4-2
RWQCB Non-wetland Waters

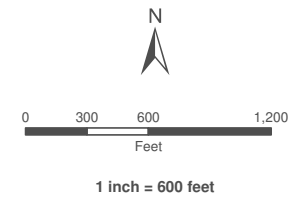
Clean Harbors

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Kern County Planning and Natural Resources Department
Clean Harbors, WMU
By: Clean Harbors Buttonwillow, LLC



- Site Boundary
- Project Footprint
- CDFW Non-Riparian Streambed



SOURCE: Glen Lukos Associates, Inc. 2020
2022

DUDEK

FIGURE 4.4-3
CDFW Non-riparian Streambed
Clean Harbors

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Tributary A1 Tributary A1 is a relic drainage feature that has become effectively isolated from upstream flows by the construction of Lokern Road and the existing solid waste Facility. Tributary A1 is a relic tributary to Drainage A that once conveyed flows from south to north toward its confluence with Drainage A. Tributary A1 is sparsely vegetated with upland annual species including ripgut brome, soft chess, common fiddleneck, orehound, and Russian thistle. RWQCB jurisdiction associated with Tributary A1 occurs entirely outside of the project footprint and comprises approximately 0.51 acre and 1,333 linear feet, none of which consists of jurisdictional wetlands (Figure 4.4-2).

Tributary A2 Tributary A2 is a relic drainage feature that has become effectively isolated from upstream flows by Lokern Road. Tributary A2 is a relic tributary to Drainage A that once conveyed flows from south to north toward its confluence with Drainage A. Tributary A2 is sparsely vegetated with upland annual species including ripgut brome, soft chess, common fiddleneck, horehound, and Russian thistle. RWQCB jurisdiction associated with Tributary A2 occurs entirely outside of the project footprint and comprises approximately 0.97 acre and 1,749 linear feet, none of which consists of jurisdictional wetlands (Figure 4.4-2).

Tributary A3 Tributary A3 is a relic drainage feature that has become effectively isolated from upstream flows by Loekan Road. Tributary A3 is a relic tributary to Drainage A that once conveyed flows from south to north toward its confluence with Drainage A. Tributary A3 is sparsely vegetated with upland annual species including ripgut brome, soft chess, common fiddleneck, horehound, and Russian thistle.

RWQCB jurisdiction associated with Tributary A2 occurs entirely outside of the project footprint and comprises approximately 0.49 acre and 1,100 linear feet, none of which consists of jurisdictional wetlands (Figure 4.4-2).

Drainage B Drainage B is a relic drainage feature that has become effectively isolated from upstream flows by Lokern Road. Drainage B once conveyed flows from south to north across the southeastern corner of the project site. Drainage B is sparsely vegetated with upland perennial and annual species such as allscale, spiny saltbush, Russian thistle, common fiddleneck, horehound, soft chess and ripgut brome.

RWQCB jurisdiction associated with Drainage B occurs entirely outside of the project footprint and comprises approximately 0.45 acre and 1,138 linear feet, none of which consists of CDFW jurisdictional wetlands (Figure 4.4-2).

CDFW Jurisdiction

CDFW jurisdiction associated with the project site occurs south of the proposed stockpile area and totals approximately 8.27 acres and 8,005 linear feet, none of which consists of CDFW jurisdictional riparian resources as show in Table 4.4-6 *CDFW Jurisdiction*.

TABLE 4.4-6: CDFW JURISDICTION

Unvegetated Streambed		
Drainage Features	Potentially Jurisdiction (acres)	Linear Feet of Streambed
Drainage A	3.68	2,685
Tributary A1	0.68	1,333
Tributary A2	1.73	1,749
Tributary A3	0.91	1,100

TABLE 4.4-6: CDFW JURISDICTION

Unvegetated Streambed		
Drainage Features	Potentially Jurisdiction (acres)	Linear Feet of Streambed
Tributary B	1.27	1,138
Total	8.27	8,005

Drainage A Drainage A is a relic drainage feature that has become effectively isolated from upstream flows by the construction of Lokern Road and the existing solid waste Facility. Drainage A once conveyed flows from south to north and occurs adjacent to the southern limit of the proposed stockpile areas. Drainage A is sparsely vegetated by upland perennial and annual species such as allscale, spiny saltbush, Russian thistle, common fiddleneck, horehound, soft chess and riggut brome.

CDFW jurisdiction associated with Drainage A occurs entirely outside of the project footprint and comprises approximately 3.68 acres and 2,685 linear feet, none of which consists of CDFW jurisdictional riparian resources (Figure 4.4-3).

Tributary A1 Tributary A1 is a relic drainage feature that has become effectively isolated from upstream flows by the construction of Lokern Road and the existing solid waste Facility. Tributary A1 is a relic tributary to Drainage A that once conveyed flows from south to north toward its confluence with Drainage A. Tributary A1 is sparsely vegetated with upland annual species including riggut brome, soft chess, common fiddleneck, horehound, and Russian thistle.

CDFW jurisdiction associated with Tributary A1 occurs entirely outside of the project footprint and comprises approximately 0.68 acre and 1,333 linear feet, none of which consists of CDFW jurisdictional riparian resources (Figure 4.4-3).

Tributary A2 Tributary A2 is a relic drainage feature that has become effectively isolated from upstream flows by Lokern Road. Tributary A2 is a relic tributary to Drainage A that once conveyed flows from south to north toward its confluence with Drainage A. Tributary A2 is sparsely vegetated with upland annual species including riggut brome, soft chess, common fiddleneck, horehound, and Russian thistle.

CDFW jurisdiction associated with Tributary A2 occurs entirely outside of the project footprint and comprises approximately 1.73 acre and 1,749 linear feet, none of which consists of CDFW jurisdictional riparian resources (Figure 4.4-3).

Tributary A3 Tributary A3 is a relic drainage feature that has become effectively isolated from upstream flows by Lokern Road. Tributary A3 is a relic tributary to Drainage A that once conveyed flows from south to north toward its confluence with Drainage A. Tributary A3 is sparsely vegetated with upland annual species including riggut brome, soft chess, common fiddleneck, horehound, and Russian thistle.

CDFW jurisdiction associated with Tributary A2 occurs entirely outside of the project footprint and comprises approximately 0.91 acre and 1,100 linear feet, none of which consists of CDFW jurisdictional riparian resources (Figure 4.4-3).

Drainage B Drainage B is a relic drainage feature that has become effectively isolated from upstream flows by Lokern Road. Drainage B once conveyed flows from south to north across the southeastern corner of the project site. Drainage B is sparsely vegetated with upland perennial and annual species such as allscale, spiny saltbush, Russian thistle, common fiddleneck, horehound, soft chess and riggut brome.

CDFW jurisdiction associated with Drainage B occurs entirely outside of the project footprint and comprises approximately 1.27 acres and 1,138 linear feet, none of which consists of CDFW jurisdictional riparian resources (Figure 4.4-3).

4.4.3 Regulatory Setting

Federal

Endangered Species Act of 1973 (USC, Title 16, Sections 1531 through 1543)

The FESA and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. In addition, the FESA defines species as threatened or endangered and provides regulatory protection for listed species. The FESA also provides a program for the conservation and recovery of threatened and endangered species as well as the conservation of designated critical habitat that USFWS determines is required for the survival and recovery of these listed species.

Section 7 of the FESA requires federal agencies, in consultation with and assistance from the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. The USFWS and National Marine Fisheries Service (NMFS) share responsibilities for administering the FESA. Regulations governing interagency cooperation under Section 7 are found in California Code of Regulations (CCR) Title 50, Part 402. The opinion issued at the conclusion of consultation will include a statement authorizing “take” (i.e., to harass, harm, pursue, hunt, wound, kill, etc.) that may occur incidental to an otherwise legal activity.

Section 9 lists those actions that are prohibited under the FESA. Although take of a listed species is prohibited, it is allowed when it is incidental to an otherwise legal activity. Section 9 prohibits take of listed species of fish, wildlife, and plants without special exemption. The definition of “harm” includes significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns related to breeding, feeding, or shelter. “Harass” is defined as actions that create the likelihood of injury to listed species by disrupting normal behavioral patterns related to breeding, feeding, and shelter significantly.

Section 10 provides a means whereby a nonfederal action with the potential to result in take of a listed species can be allowed under an incidental take permit. Application procedures are found at Code of Federal Regulation (CFR), Title 50, Sections 13 and 17 for species under the jurisdiction of USFWS and CFR, Title 50, Sections 217, 220, and 222 for species under the jurisdiction of NMFS.

Section 4(a)(3) and (b)(2) of the FESA requires the designation of critical habitat to the maximum extent possible and prudent based on the best available scientific data and after considering the economic impacts of any designations. Critical habitat is defined in section 3(5)(A) of the FESA: (1) areas within the geographic range of a species that are occupied by individuals of that species and contain the primary constituent elements (physical and biological features) essential to the conservation of the species, thus warranting special management consideration or protection; and (2) areas outside of the geographic range of a species at the time of listing but that are considered essential to the conservation of the species.

Migratory Bird Treaty Act (USC, Title 16, Sections 703 through 711)

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, domestically implements a series of treaties between the United States and Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds; the act provides that it shall be unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird” (U.S. Code Title 16, Section 703). The current list of species protected by the MBTA includes several hundred species and essentially includes all native birds. Permits for take of nongame migratory birds can be issued only for specific activities, such as scientific collecting, rehabilitation, propagation, education, taxidermy, and protection of human health and safety and personal property.

Bald and Golden Eagle Protection Act of 1940 (USC, Title 16, Section 668, enacted by 54 State. 250)

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 protects bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) by prohibiting the taking, possession, and commerce of these species, and establishes civil penalties for violation of this act. Take of bald and golden eagles includes to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” To 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. (Federal Register [FR], volume 72, page 31132; 50 CFR 22.3).

Federal Clean Water Act (USC, Title 33, Sections 1251 through 1376)

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. Section 401 requires a project proponent for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The RWQCB administers the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S. Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S., including wetlands. USACE implementing regulations are found at CFR, Title 33, Sections 320 and 330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the U.S. Environmental Protection Agency (USEPA) in conjunction with USACE

(40 CFR 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.

State

California Endangered Species Act (California Fish and Game Code Section 2050 et seq.)

The CESA establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under the CESA. For projects that would affect a listed species under both the CESA and the FESA, compliance with the FESA would satisfy the CESA if CDFW determines that the federal incidental take authorization is “consistent” with the CESA under CFGC Section 2080.1. For projects that would result in take of a species listed under the CESA only, the project proponent would have to apply for a take permit under Section 2081(b).

Regional Water Quality Control Board

Under Section 401 of the CWA, the RWQCB must certify that actions receiving authorization under Section 404 of the CWA also meet state water quality standards. The RWQCB also regulates waters of the state under the Porter-Cologne Act Water Quality Control Act. The RWQCB requires projects to avoid impacts to wetlands if feasible and requires that projects do not result in a net loss of wetland acreage or a net loss of wetland function and values. The RWQCB typically requires compensatory mitigation for impacts to wetlands and/or waters of the state, which may include waters deemed ‘isolated’ or not subject to Section 404 jurisdiction, under the Solid Waste Agency of Northern Cook County (SWANCC) legal decision. The thrust of the SWANCC legal decision is that isolated, non-navigable, and intrastate waters are not “waters of the United States” subject to USACE jurisdiction under the Clean Water Act. Filling, dredging, or excavation of isolated waters may constitute a discharge of waste to waters of the state and if so, then prospective dischargers are required to file a Report of Waste Discharge to obtain Waste Discharge Requirements as authorization for that fill or waiver thereof from the RWQCB.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, waters of the state fall under the jurisdiction of the appropriate RWQCB. Under the act, the RWQCB must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters must meet waste discharge requirements of the RWQCB, which may be issued in addition to a water quality certification or waiver under Section 401 of the CWA.

California Fish and Game Code

Section 460. Under this section of the CFGC, desert kit fox may not be taken at any time.

Sections 1600 through 1616. Under these sections of the CFGC, the project proponent is required to notify CDFW prior to any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Pursuant to the code, a “stream” is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that supports or has supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial watercourses valuable to fish and wildlife are subject to CDFW jurisdiction. CDFW also has jurisdiction over dry washes that carry water during storm events. Preliminary notification and project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement, which becomes part of the plans, specifications, and bid documents for the project.

Sections 2080 and 2081. Section 2080 of the CFGC states that “No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act [NPPA], or the California Desert Native Plants Act.” Pursuant to Section 2081 of the code, CDFW may authorize individuals or public agencies to import, export, take, or possess state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or memoranda of understanding if the take is incidental to an otherwise lawful activity, impacts of the authorized take are minimized and fully mitigated, the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and the project proponent ensures adequate funding to implement the measures required by CDFW, which makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

Sections 3503, 3503.5, 3513, and 3800. Under these sections of the CFGC, the project proponent is not allowed to conduct activities that would result in the taking, possessing, or destroying of any birds of prey or their nests or eggs; the taking or possessing of any migratory nongame bird as designated in the MBTA; the taking, possessing, or needlessly destroying of the nest or eggs of any bird; or the taking of any nongame bird pursuant to California Fish and Game Code Section 3800.

Sections 3511, 4700, 5050, and 5515. Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the CFGC. These statutes prohibit take or possession of fully protected species. CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species.

Sections 4000 through 4003. Under Section 4000 of the CFGC, it is unlawful to conduct activities that would result in the taking, possessing, or destroying of any fur-bearing mammals, including kit foxes, without prior authorization from the CDFW.

CEQA Guidelines, Section 15380

In addition to the protections provided by specific federal and state statutes, CEQA *Guidelines* Section 15380(b) provides that a species not listed on the federal or state list of protected species nonetheless may be considered rare or endangered for purposes of CEQA if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the ESA and the section of the CFGC dealing with rare or endangered plants or animals. This section was included in CEQA primarily to

deal with situations in which a public agency is reviewing a project that may have a significant effort on, for example, a candidate species that has not been listed by either USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected, if warranted. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities. Although natural communities do not at present have legal protection of any kind, CEQA calls for an assessment of whether any such resources would be affected and requires findings of significance if there would be substantial losses. Natural communities listed by CNDDDB as sensitive are considered by CDFW to be significant resources and fall under the CEQA *Guidelines* for addressing impacts. Local planning documents such as general plans often identify these resources as well.

Native Plant Protection Act (California Fish and Game Code Sections 1900 through 1913)

California's Native Plant Protection Act (NPPA) requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the NPPA prohibit the taking of listed plants from the wild and require notification of CDFW at least ten days in advance of any change in land use. This allows CDFW to salvage listed plant species that otherwise would be destroyed. The project proponent is required to conduct botanical inventories and consult with CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

California Desert Native Plant Protection Act (California Food and Agricultural Code Sections 800071 through 80075)

The California Desert Native Plant Protection Act affords protection to certain native desert plant species to make the harvest, transport, sale, or possession of these species unlawful unless a permit is first obtained. It restricts harvesting of the following plants, except for educational or scientific purposes under a permit issued by the commissioner of the county in which the native plants are growing:

- All species of the genus *Burseraceae* family (such as elephant tree [*Bursera microphylla*], saguaro cactus [*Carnegiea gigantea*], barrel cactus [*Ferocactus acanthodes*], and panamint dudleya [*Dudleya saxosa*])

The California Desert Native Plant Protection Act also restricts harvesting of the following species, except under a permit issued by the commissioner of the sheriff of the county in which the native plants are growing:

- All species of the agave family (*Agavaceae*)
- All species of the genus *Prosopis*
- All species of the genus *Cercidium*
- All species of the cacti family *Cactaceae*, besides saguaro and barrel cactus which are protected as described above.
- All species of the ocotillo & candlewood family *Fouquieriaceae*
- Catclaw (*Acacia greggii*), desert-holly (*Atriplex hymenelytra*), smoke tree (*Dalea spinose*), and desert ironwood (*Olneya tesota*)

Regional

Kern County Draft Valley Floor Habitat Conservation Plan

The project site is within the management area of the Draft Kern County Valley Floor Habitat Conservation Plan (KCVFHCP). The Draft KCVFHCP area is in the western portion of Kern County except for areas at the base of the Tehachapi Mountains. The area is limited to the southern San Joaquin Valley floor of Kern County, including the project site.

The KCVFHCP is a pending Habitat Conservation Plan (HCP) pursuant to the ESA covering over 3,110 square miles in Kern County with a purpose of creating a comprehensive strategy to conserve and protect the SJKF, BNLL, and 23 other sensitive species. In addition, this KCVFHCP provides a streamlined program for complying with the requirements of the CESA and ESA. The KCVFHCP has not yet been approved by the USFWS, CDFW, or the Kern County Board of Supervisors.

If and when completed, incidental take permits for 13 covered species would be issued to participating State agencies and local jurisdictions. This incidental take authorization cannot be implemented, however, until the local governments complete the application for incidental take permits and receive approval from Federal and State wildlife agencies.

Local

Kern County General Plan

The Kern County General Plan identifies the federal, state, and local statutes, ordinances, and policies that govern the conservation of biological resources that must be considered by Kern County during the decision-making process for any project that could affect biological resources.

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

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: The County should work closely with State and Federal agencies to assure that discretionary projects avoid or minimize impacts on 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 31: Under the provisions of CEQA, the County, as lead agency, will solicit comments from the CDFW and the USFWS 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 the USACE and the CDFW rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.

Implementation Measures

Measure Q: Discretionary projects shall consider effects to biological resources as required by CEQA.

Measure R: Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to CEQA.

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.

1.10.10 Oak Tree Conservation

Policies

Policy 65. Oak woodlands and large oak trees shall be protected where possible and incorporated into project developments.

Policy 66. Promote the conservation of oak tree woodlands for their environmental value and scenic beauty.

Implementation Measures

KK. The following applies to discretionary development projects (General Plan Amendment, zone change, conditional use permit, tract maps, parcel maps, precise development plan) that contains oak woodlands, which are defined as development parcels having canopy cover by oak trees of at least ten percent (10%), as determined from base line aerial photography or by site survey performed by a licensed or certified arborist or botanist. If this study is used in an Environmental Impact Report, then a registered Professional Forester (RPF) shall perform the necessary analysis.

- a. Development parcels containing oak woodlands are subject to a minimum canopy coverage retention standard of thirty percent (30%). The consultant shall include recommendations regarding thinning and diseased tree removal in conjunction with the discretionary project.
- b. Use of aerial photography and a dot grid system shall be considered adequate in determining the required canopy coverage standard.
- c. Adjustments below thirty percent (30%) minimum canopy standard may be made based on a report to assess the management of oak woodlands.
- d. Discretionary development, within areas designated as meeting the minimum canopy standard, shall avoid the area beneath and within the trees unaltered drip line unless approved by a licensed and certified arborist or botanist.

LL. The following applies to development of parcels having oak tree canopy cover of less than ten percent (10%), but containing individual oak trees equal to or greater than a 12-inch diameter trunk at 4.5 feet breast height.

- a. Such trees shall be identified on plot plans.
- b. Discretionary development shall avoid the area beneath and within the trees unaltered drip line unless approved by a licensed or certified arborist or botanist.
- c. Specified tree removal related to the discretionary action may be granted by the decision making body upon showing that a hardship exists based on substantial evidence in the record.

Chapter 19.81, Dark Skies Ordinance (Outdoor Lighting)

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

Objective 1: Encourage a safe, secure, and less light-oriented night-time environment for residents, businesses and visitors.

Objective 2: Promote a reduction in unnecessary light intensity and glare, and to reduce light spillover onto adjacent properties.

Objective 3: Protect the ability to view the night sky by restricting unnecessary upward projections of light.

Objective 4: Promote a reduction in the generation of greenhouse gases by reducing wasted electricity that can result from excessive or unwanted outdoor lighting.

4.4.4 Impacts and Mitigation Measures

This section evaluates the impacts to biological resources that may occur during construction and operation of the proposed project. It describes the sensitive biological resources located on and adjacent to the project site that may be affected and identifies the thresholds used to determine 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

The following impact analysis is based on existing and potential biological resources occurring within the project site and vicinity of the project identified through a review of relevant literature and the *Biological Technical Report for Clean Harbors Buttonwillow, LLC, SMU 36, 37 & 38 Nonhazardous Waste Disposal Landfill Project*, (BTR) prepared by Glen Lukos Associates, Inc., on December 14, 2021 (Appendix D). Appendix D consists of three main components: delineation of aquatic resources subject to the jurisdiction of the USACE, RWQCB, and CDFW; vegetation mapping for the project site; and habitat assessments and

focused surveys to evaluate the presence/absence of special-status species in accordance with the requirements of CEQA. Biological resources evaluated included sensitive habitats, special-status plant and animal species, and potential for wildlife movement corridors. The potential for special-status species to occur on the project site is based on the results of database research, biological assessments, surveys conducted on the project site and vicinity, presence of suitable habitat, and the proximity of the project site to previously recorded occurrences in the CNDDDB, CDFW, and USFWS data. Other sources of information used include aerial photographs, topographic maps, soil survey maps, geological maps, climatic data, previous biological studies, and project plans.

Reconnaissance and directed surveys for sensitive plants, animals and other biological resources were conducted on the project site from March through September of 2019. The impact analyses presented here address potential biological resources located on the project site based on results of field surveys detailed in Appendix D of this EIR.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

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

A project would have a significant adverse effect on biological resources if it:

- a. Has a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or the USFWS;
- b. Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or the USFWS;
- c. Has a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- d. 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 a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Overview

The proposed project has the potential to impact special-status plants and wildlife through the loss of habitat, as well as direct and indirect impacts on species, such as mortality of individuals, interference with reproductive success, introduction of invasive species, and habitat degradation. Potential impacts to special-status plants and wildlife from construction, operation and maintenance, and decommissioning are discussed below.

Construction

Sensitive Vegetation Communities

The proposed project would not impact any sensitive vegetation communities. As discussed in Section 4.4.2, three types of vegetation communities are found on the project site. Approximately 143.24 acres of the project site are vegetated with shrubland community, and approximately 85.70 acres are vegetated with semi-natural grassland communities; both of which are not considered sensitive. The remaining approximately 326.28 acres of the project site is disturbed/developed land use type, which is not vegetated. As shown in Table 4.4-6 *Summary of Vegetation/Land Use Impacts*, the proposed project would

result in approximately 129 acres of permanent impact to vegetation on the project site, but does not include impacts to sensitive vegetation communities.

TABLE 4.4-7: SUMMARY OF VEGETATION/LAND USE IMPACTS

Vegetation Community/Land Use Type	Permanent Impacts (acres)	Temporary Impacts (acres)	Avoided (acres)
<i>Atriplex polycarpa</i> (Allscale Scrub) Shrubland Alliance	103.16	0.00	40.08
<i>Bromus sp. – Hordeum sp.</i> Semi-Natural Grassland Alliance	22.61	0.00	63.09
Disturbed/Developed	3.33	0.00	N/A
Total	129.10	0.00	103.17

Special-Status Plants

Direct impacts to the special-status plants and their habitat may include mortality of individuals as a result of permanent removal or damage to root structures during the construction phase of the project through activities like clearing vegetation and removal of suitable habitat. Other direct impacts may include clearing and grading activities that could disturb and compress soils, potentially destroying seed banks and preventing or reducing future utilization of the area by these species. Indirect impacts may include construction-related dust, erosion, runoff, and introduction of invasive species on disturbed soils. Increased dust during construction activities could decrease a plant’s ability to photosynthesize. This could result in diminished reproduction or loss of special-status plants. Construction equipment, vehicles, or imported materials could introduce and spread non-native invasive plant species within the project area, which could outcompete special-status plants for resources such as water and space. In addition, suitable habitat could become monotypic, thereby reducing quality and diversity of native vegetation communities on site.

The proposed project will impact one special-status plant species; the federally listed as endangered and CNPS Rank 1B.2 Kern mallow (*Eremalche parryi* ssp. *Kernensis*). The species was observed at three locations, comprising a total of approximately 12 individuals, within the northernmost proposed stockpile area, east of the existing solid waste Facility. Each mapped location consists of between three to five individual plants that occur along the margins of allscale scrub and bare ground along with a suite of other native annual species including coastal goldfields (*Lasthenia gracilis*) white layia (*Layia glandulosa*), devil’s lettuce (*Amsinckia tesellata*), lacy phacelia (*Phacelia tanacetifolia*), purple owl’s clover (*Castilleja exserta*), white mallow (*Eremalche exilis*), and Parry’s mallow (*Eremalche parryi*).

Impacts to kern mallow would occur as a result of construction of the proposed non-hazardous waste landfill expansion and the new hazardous waste buildings at the solid waste Facility. These impacts would be considered significant prior to mitigation. With implementation of Mitigation Measure MM 4.4-3, which would require consultation with USFWS prior to project initiation and the preparation of a Kern mallow translocation plan, impacts to special-status plant species would be less than significant.

Special-Status Wildlife

The proposed project will result in the loss of 103.16 acres of allscale scrub habitat, and approximately 22.61 acres of *Bromus sp. – Hordeum sp.* semi-natural grasslands habitat that support or have the potential

to support several special-status species, including both listed and non-listed species. Approximately 40.08 acres of allscale scrub habitat, and approximately 63.09 acres of *Bromus* sp. – *Hordeum* sp. semi-natural grassland habitat south of the proposed stockpile areas that support or have the potential to support several special-status species, will be avoided by the proposed project.

Listed Species

Reptiles. The project site provides suitable habitat for one listed reptile species; the federal and state listed endangered blunt-nosed leopard lizard (*Gambelia sila*). Suitable blunt-nosed leopard lizard habitat within the project site includes portions of the proposed stockpile locations as well as the majority of avoided lands south of the proposed stockpile locations – specifically, areas mapped as allscale scrub with a very open shrub canopy, areas mapped as semi-natural grasslands, and washes that are characterized by relatively flat topography. A high number of small mammal burrows throughout the project site also provide an essential habitat constituent for the species. The proposed project will result in impacts to approximately 103.16 acres of allscale scrub and approximately 22.61 acres of herbaceous semi-natural grassland, both of which represent suitable live-in and foraging habitat for the species. Approximately 40.08 acres of suitable allscale scrub and 63.09 acres of suitable semi-natural grassland habitats south of the proposed stockpile areas will be avoided by the proposed project. If the species is present, the proposed impacts to occupied habitat would be potentially significant. The loss of occupied habitat for the blunt-nosed leopard lizard would be considered a take under the FESA and would require authorization from USFWS under either Section 7 or Section 10 of FESA. As a CFP, take of individuals of this species are prohibited under CESA. However, implementation of mitigation measure MM 4.4-4 would require consultation with CDFW and USFWS and preconstruction surveys, and a mitigation plan, as necessary. Implementation of MM 4.4-4 would reduce the potential impact to the blunt-nosed leopard lizard to less than significant.

Birds. The project site provides suitable foraging habitat for one listed bird species; the state listed as endangered Swainson's hawk (*Buteo swainsoni*). Suitable Swainson's hawk foraging habitat within the project site includes portions of the proposed stockpile locations, areas to the south mapped as semi-natural grasslands, and areas mapped as allscale scrub with a very open shrub canopy. The proposed project will result in impacts to approximately 103.16 acres of allscale scrub and approximately 22.61 acres of herbaceous semi-natural grassland, both of which represent suitable foraging habitat for Swainson's hawk. The project site does not support suitable nesting habitat for Swainson's hawk, however, suitable nesting habitat for the species does occur within 0.5-mile of the project site.

Given the quality and extent of suitable raptor foraging habitat west, south and east of the proposed project, and the existing level of human disturbance and presence adjacent to the proposed project, the avoidance of approximately 40.08 acres of suitable allscale scrub and 63.09 acres of suitable semi-natural grassland habitats south of the proposed stockpile areas, impacts to approximately 125.77 acres of potential foraging habitat for Swainson's hawk would be considered less than significant. However, if nests occur within 0.5-mile of the project site, impacts to the species could be considered significant. Mitigation measures MM 4.4-5 would require preconstruction surveys, consultation with CDFW, and habitat mitigation, as necessary. With implementation of MM 4.4-5, potential impacts to Swainson's hawk would be reduced to less than significant.

Mammals. The project site supports areas of suitable habitat that are occupied, or potentially occupied, by three listed mammal species, including the federal and state listed as endangered giant kangaroo rat (*Dipodomys ingens*); the state listed as threatened Nelson's antelope ground squirrel (*Ammospermophilus nelsoni*); and the federal listed as endangered and state listed as threatened San Joaquin kit fox (*Vulpes*

macrotis mutica). Additionally, the project site supports suitable habitat for the federal and state listed as endangered Tipton kangaroo rat (*Dipodomys nitraoides nitraoides*). Areas east of the existing Facility mapped as allscale scrub and semi-natural grassland comprise suitable habitat for all of the aforementioned mammal species. Namely, preferred habitat constituents for the three listed small mammal species: giant kangaroo rat, Nelson's antelope ground squirrel, and Tipton kangaroo rat are present throughout the project site and include portions of the proposed stockpile locations, areas to the south mapped as seminatural grasslands, areas mapped as allscale scrub with a very open shrub canopy, and washes and berms along the roadside. A high number of small mammal burrows are present throughout these areas and serve as evidence for small mammal suitability, and also suggest that adequate forage is present for the San Joaquin kit fox.

The proposed project will result in impacts to approximately 103.16 acres of allscale scrub and approximately 22.61 acres of herbaceous semi-natural grassland – combined they represent suitable habitat for all four species. Approximately 40.08 acres of suitable allscale scrub and 63.09 acres of suitable semi-natural grassland habitats south of the proposed stockpile areas will be avoided by the project. Additionally, the loss of occupied habitat for the three federal and state listed species; giant kangaroo rat, San Joaquin kit fox and Tipton kangaroo rat would be considered a take requiring authorization from USFWS under either Section 7 or Section 10 of the ESA, as well as an Incidental Take Permit (ITP) from CDFW. The loss of occupied habitat for the Nelson's antelope ground squirrel would only require an ITP from CDFW. The proposed impacts to occupied habitat would be potentially significant to the giant kangaroo rat, Nelson's antelope ground squirrel, San Joaquin kit fox, and the Tipton kangaroo rat. However, mitigation measures MM 4.4-8 through 4.4-11 would require consultation with CDFW and/or USFWS, depending on the species, and mitigation plans, as necessary depending on the results of consultation. With implementation of MM 4.4-8 through 4.4-11 the potentially significant impacts to giant kangaroo rat, Nelson's antelope ground squirrel, San Joaquin kit fox, and the Tipton kangaroo rat would be reduced to less than significant.

Non-Listed Species

Reptiles. The project site supports suitable habitat for three reptile species that are CDFW designated Species of Special Concern, including California glossy snake (*Arizona elegans occidentalis*), coast horned lizard (*Phrynosoma blainvillii*), and San Joaquin coachwhip (*Masticophis flagellum ruddocki*). The proposed project will result in impacts to approximately 103.16 acres of allscale scrub and approximately 22.61 acres of herbaceous semi-natural grassland, both of which represent potentially suitable habitat for the aforementioned species. Approximately 40.08 acres of suitable allscale scrub and 63.09 acres of suitable semi-natural grassland habitats south of the proposed stockpile areas will be avoided by the proposed project.

California glossy snake, coast horned lizard and California glossy snake are all known to occupy relatively large ranges throughout California, as well as utilize a variety of habitat types across their ranges. The quantity of impacted habitat on site does not represent an area that is critical to the overall health of each species across its range. Additionally, the quality of suitable habitat on site is impaired by the proposed project's proximity to the existing solid waste Facility and the various types of disturbance (noise, lighting, dust, etc.) associated with the ongoing operation of the solid waste Facility. As a result, proposed impacts to approximately 125.77 acres of suitable habitat would not result in substantial, adverse impacts to California glossy snake, coast horned lizard or San Joaquin coachwhip, and would therefore be considered less than significant.

Birds. The project site provides suitable foraging and breeding habitat for the CDFW designated Species of Special Concern, burrowing owl (*Athene cunicularia*) in areas mapped as seminatural grasslands. The

species was not observed at the project site, however, focused surveys for the species were not conducted. The proposed project will result in impact to approximately 22.61 acres of herbaceous semi-natural grassland, which constitutes suitable breeding habitat for the species. Approximately 63.09 acres of suitable herbaceous semi-natural grassland habitat will be avoided by the proposed project. The loss of approximately 22.61 acres of potential breeding habitat for burrowing owl would be considered a potentially significant impact, if the impacted areas were to be occupied by at least one pair of breeding owls. This is considered a potentially significant impact; however, with the implementation of MM 4.4-12, which would require the preparation of a mitigation plan and consultation with the CDFW and USFWS, potential impacts to burrowing owls would be reduced to less than significant levels.

The project site provides suitable foraging habitat for two non-listed species that are CDFW designated Species of Special Concern, including golden eagle (*Aquila chrysaetos*) and northern harrier (*Circus cyaneus*). The proposed project will result in impacts to approximately 103.16 acres of allscale scrub and approximately 22.61 acres of herbaceous semi-natural grassland, both of which represent suitable foraging habitat these species. Approximately 40.08 acres of suitable allscale scrub and 63.09 acres of suitable semi-natural grassland foraging habitats south of the proposed stockpile areas will be avoided by the project. Both golden eagle and northern harrier are known to occupy relatively large ranges throughout California and beyond, as well as utilize a variety of habitat types across their ranges. The quantity of impacted habitat on site does not represent an area that is critical to the overall health of each species across its range. Additionally, the quality of suitable habitat on site is impaired by the project's proximity to the existing solid waste Facility and the various types of disturbance (noise, lighting, dust, etc.) associated with the ongoing operation of the solid waste Facility. As a result, proposed impacts to approximately 125.77 acres of potentially suitable habitat would not result in substantial, adverse impacts to golden eagle or northern harrier, and would therefore be considered less than significant.

Additionally, the project site supports suitable habitat for two other non-listed species that are CDFW designated Species of Special Concern; Le Conte's thrasher (*Toxostoma lecontei*) and loggerhead shrike (*Lanius ludovicianus*). The proposed project will result in impacts to approximately 103.16 acres of all scale scrub, which represents suitable breeding and foraging habitat for both the Le Conte's thrasher and the loggerhead shrike. The proposed project will also result in impacts to 22.61 acres of herbaceous semi-natural grassland, which represents suitable foraging habitat for the loggerhead shrike. Approximately 40.08 acres of suitable allscale scrub and 63.09 acres of suitable semi-natural grassland habitats south of the proposed stockpile areas will be avoided by the project. Both Le Conte's thrasher and loggerhead shrike are known to occupy relatively large ranges throughout California and beyond, and the quantity of impacted habitat on site does not represent an area that is critical to the overall health of each species across its range. Additionally, the quality of suitable habitat on site is impaired by the project's proximity to the existing solid waste Facility and the various types of disturbance (noise, lighting, dust, etc.) associated with the ongoing operation of the solid waste Facility. As a result, proposed impacts to approximately 125.77 acres of suitable habitat would not result in substantial, adverse impacts to Le Conte's thrasher or loggerhead shrike, and would therefore be considered less than significant.

Mammals. The project site supports suitable habitat for three non-listed small mammal species that are CDFW designated Species of Special Concern, including short-nosed kangaroo rat (*Dipodomys nitraoides brevinasus*), southern grasshopper mouse (*Onychomys torridus ramona*), and Tulare grasshopper mouse (*Onychomys torridus tularensis*). The proposed project will result in impacts to approximately 103.16 acres of allscale scrub and approximately 22.61 acres of herbaceous semi-natural grassland, both of which represent suitable habitat for the small mammal species listed above. Approximately 40.08 acres of suitable

allscale scrub and 63.09 acres of suitable semi-natural grassland habitats south of the proposed stockpile areas will be avoided by the project. The quantity of impacted habitat on site does not represent an area that is critical to the overall health of each species across its range. Additionally, the quality of suitable habitat on site is impaired by the project's proximity to the existing solid waste Facility and the various types of disturbance (noise, lighting, dust, etc.) associated with the ongoing operation of the solid waste Facility. As a result, proposed impacts to approximately 125.77 acres of suitable habitat would not result in substantial, adverse impacts to short-nosed kangaroo rat, southern grasshopper mouse, or Tulare grasshopper mouse, and would therefore be considered less than significant.

The project site supports suitable foraging habitat for the CDFW designated Species of Special Concern western mastiff bat (*Eumops perotis californicus*). The proposed project will result in impacts to approximately 103.16 acres of allscale scrub and approximately 22.61 acres of herbaceous semi-natural grassland, both of which represent suitable foraging habitat for the species. Approximately 40.08 acres of suitable allscale scrub and 63.09 acres of suitable seminatural grassland foraging habitats south of the proposed stockpile areas will be avoided by the project. Western mastiff bat is known to occupy a relatively large range throughout California and beyond, as well as utilize a variety of habitat types across its range. The habitat on site does not represent an area that is critical to the overall health of each species across its range, particularly since it lacks the vertical structure necessary for roosting or for maternity colonies. Additionally, the quality of suitable foraging habitat on site is impaired by the project's proximity to the existing solid waste Facility and the various types of disturbance (noise, lighting, dust, etc.) associated with the ongoing operation of the solid waste Facility. As a result, proposed impacts to approximately 125.77 acres of suitable foraging habitat would not result in substantial, adverse impacts to western mastiff bat, and would therefore be considered less than significant.

Migratory Birds. Project-related direct impacts on nesting birds during construction could include crushing of or vehicle collisions with nesting birds and/or destruction of nests and eggs during vegetation clearing and grading with heavy machinery. Potential indirect impacts include interference with reproductive success and nest abandonment in adjacent areas from increased human presence and increased noise levels (and vibration) from project construction. Reproductive and nest impact could occur if construction occurs during the breeding season, which is generally considered to be February 1 through September 15. Impacts to these species would be considered significant. To reduce potentially significant impacts to nesting birds, Mitigation Measure MM 4.4-4 requires implementation of preconstruction nesting bird surveys as well as avoidance and minimization measures if active nests are found. With the implementation of MM 4.4-4, impacts to nesting or foraging birds would be less than significant during construction.

Operations and Maintenance

Direct impacts to special-status species are unlikely to result from project operation and maintenance activities because project implementation would remove habitat for special-status species on the project site, which would restrict sensitive wildlife species movement into the project site. Additionally, Mitigation Measures MM 4.4-2 and MM 4.4-3 require methods designed to reduce wildlife mortality and impacts, promote long-term project site suitability, and educate onsite personnel. Operational activities would be consistent with the activities currently occurring on at the solid waste Facility and would not result in new operation or maintenance activities that could result in potential impacts.

Potential indirect impacts to wildlife could also result from nighttime lighting associated with the project facilities, as described in more detail in Section 4.1, *Aesthetics*. However, potential indirect impacts from

nighttime lighting during operation and maintenance would be minimized through compliance with all development standards, the Kern County Zoning Ordinance, and the goals, policies, and implementation measures of the Kern County General Plan. The project would be required to implement Mitigation Measure MM 4.1-1 (COM, BEF, LDF), included in Section 4.1, *Aesthetics*, which requires compliance with Kern County's Dark Skies Ordinance to minimize nighttime lighting in unincorporated areas of Kern County. Compliance with this measure to minimize nighttime lighting would reduce indirect impacts to wildlife to a less-than-significant level.

Summary

Potentially significant impacts to special-status animal species would be avoided and or minimized through implementation of Mitigation Measures MM 4.1-1 and MM 4.4-1 through MM 4.4-12; therefore, impacts would be less than significant with mitigation.

Mitigation Measures

MM 4.4-1: Prior to the issuance of grading or building permits, the project operator shall retain a Lead Biologist who meets the qualifications of an Authorized Biologist as defined by USFWS to oversee compliance with protection measures for all listed and other special-status species. The Lead Biologist shall be on the project site during construction of perimeter fencing and grading activities throughout the construction phase. The Lead Biologist shall have the right to halt all activities that are in violation of the special-status species protection measures. Work shall proceed only after hazards to special-status species are removed and the species is no longer at risk. The Lead Biologist shall have in her/his possession a copy of all the compliance measures while work is being conducted on the project site.

MM 4.4-2: Construction Worker Environmental Awareness Program. Prior to the issuance of grading or building permits and for the duration of construction activities, within one week of employment all new construction workers at the project site, laydown area and/or transmission routes shall attend a Worker Environmental Awareness Program (WEAP), developed and presented by a qualified biologist. The WEAP shall include:

- a) Any employee responsible for the operations and maintenance of the project facilities shall also attend the WEAP training.
- b) The program shall include information on the life history of the blunt nosed leopard lizard, Swainson's hawk, giant kangaroo rat, Nelson's Antelope ground squirrel, San Joaquin kit fox, Tipton kangaroo rat, burrowing owl, and nesting birds, and other wildlife and plant species that may be encountered during construction activities. The program shall also discuss the legal protection status of each species, the definition of "take" under the Federal Endangered Species Act and California Endangered Species Act, measures the project proponent is implementing to protect the species, reporting requirements, specific measures that each worker shall employ to avoid take of wildlife species, and penalties for violation of the Federal Endangered Species Act or California Endangered Species Act.

- c) An acknowledgement form signed by each worker indicating that WEAP training has been completed would be kept on record.
- d) A sticker shall be placed on hard hats indicating that the worker has completed the Worker Environmental Awareness Program. Construction workers shall not be permitted to operate equipment within the construction areas unless they have attended the WEAP training and are wearing hard hats with the required sticker.
- e) A copy of the list of the names of all personnel who attended the Worker Environmental Awareness Program and copies of the signed acknowledgement forms shall be submitted to the Kern County Planning and Natural Resources Department.
- f) A copy of the training transcript, training video or informational binder (including such information as trenching protection for kit fox requirements) for specific procedures shall be kept available for all personnel to review and be familiar with as necessary.
- g) The construction crews and contractor(s) shall be responsible for unauthorized impacts from construction activities to sensitive biological resources that are outside the areas defined as subject to impacts by project permits.

MM 4.4-3: The project proponent shall consult with the USFWS prior to the disturbance of the proposed stockpile areas to authorize impacts to the Kern mallow. The following measures will apply:

- a) The project proponent shall prepare a Kern Mallow Translocation Plan (Translocation Plan) that will be submitted to the USFWS for review and approval as a part of the process to obtain take authorization pursuant to FESA. The Translocation Plan will address at a minimum the preparation of the onsite preserved habitat for plant and soil translocation, pre-disturbance surveys to map current plant locations, seed collection and dispersal to the preserved habitat, and the collection and translocation of topsoil.
- b) A pre-disturbance survey shall be performed for Kern mallow during the Spring flowering season (March through May) prior to disturbance of the stockpile areas. All plants detected shall be marked with a pin flag and the location will be recorded using a Global Positioning System (GPS) unit. Seed shall be collected from the plants at the appropriate time for dispersal to the preserved mitigation area. If the seed is not immediately transferred to the mitigation area, the seed shall be stored in paper bags in a cool, dry area.
- c) Topsoil shall be collected from within a 2-meter radius of mapped Kern mallow locations after seed has been collected from individual plants. The salvaged soil shall be dispersed within the onsite mitigation areas. Hand dispersal of the salvaged topsoil shall occur around the base of well-established *Atriplex polycarpa* shrubs to mimic the microhabitat conditions in which the plants were observed occurring onsite. Following the dispersal of the salvaged soil, the collected seed shall be spread into the soil.

MM 4.4-4: Prior to the disturbance of the proposed stockpile areas – as part of the overall coordination that is required with USFWS and CDFW to authorize take of other species listed herein – the project proponent shall consult with the agencies about the blunt-nosed leopard lizard. the intent of the project design is to utilize the onsite avoidance as mitigation for the

potential loss of leopard lizard habitat, which would reduce impacts to below a level of significance under CEQA. If additional mitigation is needed pursuant to obtaining take authorization, then the project proponent will identify off-site conservation lands for the leopard lizard.

The following measures will apply to the blunt-nosed leopard lizard, as needed, prior to the disturbance of the proposed stockpile areas:

- a) If the blunt-nosed leopard lizard (BNLL) can be confirmed absent from the project site through focused surveys, then the additional measures would not apply to the project. If applicable, focused surveys shall be conducted in accordance with CDFW's October 2019 revision to the Blunt-Nosed Leopard Lizard Survey Protocol, specifically the section regarding "Surveys for Disturbances Leading to Habitat Removal". Pursuant to the protocol a total of 12 adult BNLL surveys are to be conducted between April 15 to July 15, with a maximum of four surveys per week and eight surveys within any 30-day time period. At least one survey session should comprise four consecutive days. In addition to the 12 adult BNLL surveys, five additional surveys are required between August 15 and September 30 to best detect subadult and hatchling BNLL – two of which must occur between September 15 and September 30. In total, the 17 survey days must occur within the same survey season/calendar year.
- b) If BNLL are found within the survey areas, measures to protect the species shall include appropriate signage, monitoring by approved qualified biologists and consultation with the USFWS and the CDFW to develop a BNLL avoidance plan. If burrows are found to be occupied, measures for avoidance and minimization of impact to BNLL shall be written in compliance with recommendations provided during agency consultations and shall contain project specific details. Project actions in areas where BNLL are located shall be restricted to the species active period (April to early November) to ensure that no aestivating BNLL in burrows are impacted while in their burrows. In conjunction with CDFW or other involved agencies, sensitive areas shall be established and protected with appropriate signage

MM 4.4-5: A qualified raptor biologist with Swainson's hawk survey experience, approved by CDFW and/or the appropriate lead agency, shall conduct focused surveys for Swainson's hawk prior to site disturbance in accordance the protocol set forth by the Swainson's Hawk Technical Advisory Committee's *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (2000). Per the protocol, the surveyed area will include all potential nest trees within a 0.5-mile radius of the project site. A total of six surveys are to be conducted, with three surveys to be conducted between March 20 and April 5, and an additional three surveys to be conducted either between April 5 and April 20, or between June 10 and July 30. A written report documenting the findings of the survey efforts will be provided to CDFW. If no nests are found within the survey area, no additional mitigation will be required. If Swainson's hawk nests are detected within a 0.5-mile radius of the project's proposed disturbance footprint, then the project proponent would contact CDFW to obtain an ITP. Subsequently, a qualified biologist will

prepare a Swainson's hawk Monitoring and Mitigation Plan (subject to CDFW approval) that includes the following measures at a minimum:

- a) The project shall not result in any new disturbances, habitat conversions, or any other impacts that may cause nest abandonment or forced fledgling within one half mile of an active nest between March 1 and September 15. Buffer zones may be adjusted in consultation with CDFW.
- b) The project shall not result in the removal of Swainson's hawk nest trees (no suitable nest trees occur within the project's proposed disturbance footprint).
- c) Impacts to Swainson's hawk foraging habitat shall be mitigated at a minimum ratio of 1:1 (to be determined and subsequently approved through coordination with CDFW), and shall be achieved through the conservation of suitable foraging habitat onsite, through the conservation of suitable foraging habitat offsite, through the purchasing of mitigation credits in an offsite mitigation bank, or through a combination of the options listed above.

MM 4.4-6: Prior to the disturbance of the proposed stockpile areas – as part of the overall coordination that will be required with USFWS and CDFW to authorize take of other species – the project proponent will consult with the agencies about the giant kangaroo rat. The intent of the project is to utilize the onsite avoidance as mitigation for the loss of giant kangaroo rat habitat, which would reduce impacts to below a level of significance under CEQA. If additional mitigation is needed pursuant to obtaining take authorization, then the project proponent will identify offsite conservation lands for the giant kangaroo rat.

The following measures shall apply to the giant kangaroo rat, as needed, prior to the disturbance of the proposed stockpile areas:

- a) The project proponent shall prepare a Mitigation Plan to address all avoidance and minimization measures, habitat mitigation, and potential relocation needs for all applicable special-status animals to be impacted by the project, including for the giant kangaroo rat. The Mitigation Plan shall be provided to the USFWS and CDFW for review and approval as part of the agency consultation process. The Mitigation Plan shall address any other measures needed, including additional focused surveys to confirm the occupied habitat area, trapping and relocation of individuals from the disturbance area to the preservation area, exclusionary measures to prevent impacts to individuals within the preservation area, and biological monitoring.
- b) The Mitigation Plan shall specifically address trapping and relocation of the giant kangaroo rat. Trapping and relocation would include the following specific measures:
 - Exclusion fencing shall be installed (buried > 24 inches deep and a minimum of 36 inches high) along the boundary of the project's proposed disturbance footprint and the preservation area, to prevent kangaroo rats within the preservation area from entering the disturbance area.
 - Kangaroo rat individuals shall be translocated from the disturbance area to the onsite preservation area. Trapping and relocation shall be conducted by a qualified biologist holding a valid section 10(a)1(a) recovery permit from USFWS and valid

scientific collection permits from CDFW. Trapping shall be conducted prior to ground disturbance at each location where focused trapping efforts determined occupation. Trapping shall occur for a minimum of four trapping nights and shall continue until there are two consecutive nights of unsuccessful trapping.

- All burrows where small mammals are captured shall be inspected with a burrow scope the morning following capture. If no animals are present in the burrow, the burrow shall be hand excavated by a qualified biologist.
- A biological monitor shall be present during all project-related activities occurring adjacent to the preservation area. The details of the biological monitoring shall be identified in the Mitigation Plan subject to approval by the USFWS and CDFW.

MM 4.4-7: Prior to the disturbance of the proposed stockpile areas – as part of the overall coordination that is required with CDFW to authorize take of other species – the project proponent shall consult with the agency about the Nelson’s Antelope ground squirrel. The intent of the project design is to utilize the onsite avoidance as mitigation for the loss of Nelson’s Antelope ground squirrel habitat. If additional mitigation is needed pursuant to obtaining take authorization, then the project proponent will identify offsite conservation lands for the Nelson’s Antelope ground squirrel.

The following measures shall apply to the Nelson’s Antelope ground squirrel, as needed, prior to the disturbance of the proposed stockpile areas:

- a) The project proponent shall prepare a Mitigation Plan to address all avoidance and minimization measures, habitat mitigation, and potential relocation needs for all applicable special-status animals to be impacted by the project, including for Nelson’s Antelope ground squirrel. The Mitigation Plan shall be provided to the USFWS and CDFW for review and approval as part of the agency consultation process. The Mitigation Plan shall address any other measures needed, including additional focused surveys to confirm the occupied habitat area, trapping and relocation of individuals from the disturbance area to the preservation area, exclusionary measures to prevent impacts to individuals within the preservation area, and biological monitoring.
- b) The Mitigation Plan shall specifically address trapping and relocation of the ground squirrel. Trapping and relocation would include the following specific measures:
 - Exclusion fencing shall be installed (buried > 24 inches deep and a minimum of 36 inches high) along the boundary of the project’s proposed disturbance footprint and the preservation area, to prevent ground squirrels within the preservation area from entering the disturbance area.
 - Nelson’s Antelope ground squirrel individuals shall be translocated from the disturbance area to the onsite preservation area. Trapping and relocation shall be conducted by a qualified biologist holding a valid section 10(a)1(a) recovery permit from USFWS and valid scientific collection permits from CDFW. Trapping shall be conducted prior to ground disturbance at each location where focused trapping efforts determined occupation. Trapping shall occur for a minimum of

four trapping nights and shall continue until there are two consecutive nights of unsuccessful trapping.

- All burrows where small mammals are captured shall be inspected with a burrow scope the morning following capture. If no animals are present in the burrow, the burrow shall be hand excavated by a qualified biologist.
- A biological monitor shall be present during all project-related activities occurring adjacent to the preservation area. The details of the biological monitoring shall be identified in the Mitigation Plan subject to approval by the USFWS and CDFW.

MM 4.4-8: Prior to the disturbance of the proposed stockpile areas – as part of the overall coordination that is required with USFWS and CDFW to authorize take of other species – the project proponent shall consult with the agencies about San Joaquin kit fox. The intent of the project is to utilize the onsite avoidance as mitigation for the loss of potential kit fox habitat. If additional mitigation is needed pursuant to agency consultation, then the project proponent will identify offsite mitigation options.

- a) Focused surveys shall be performed for the kit fox either in advance of consultation with the agencies, or as part of the consultation process. Surveys are to be performed by a qualified biologist in accordance with the USFWS San Joaquin Kit Fox Survey Protocol for the Northern Range (1999). The protocol states that surveys are to be conducted between May 1 and November 1 and must include one walking transect to detect known, natal and potential kit fox dens. The surveys also must include spotlighting and setting up camera/scent stations, which would be implemented after the transects are conducted. The following measures shall apply to San Joaquin kit fox, as needed, prior to the disturbance of the proposed stockpile areas:
 - b) The project proponent shall prepare a Mitigation Plan to address all avoidance and minimization measures, habitat mitigation, and potential relocation needs for all applicable special-status animals to be impacted by the project, including for the San Joaquin kit fox. The Mitigation Plan shall be provided to the USFWS and CDFW for review and approval as part of the agency consultation process. The Mitigation Plan shall address any other measures needed, including additional focused surveys to confirm the occupied habitat area, trapping and relocation of individuals from the disturbance area to the preservation area, exclusionary measures to prevent impacts to individuals within the preservation area, and biological monitoring.
 - c) The Mitigation Plan shall specifically address trapping and relocation of the kit fox, as applicable. Trapping and relocation would include the following specific measures:
 - Exclusion fencing shall be installed (buried > 24 inches deep and a minimum of 36 inches high) around the perimeter of the project's proposed disturbance footprint. Installation of the exclusion fence shall avoid potential San Joaquin kit fox dens by > 100 feet.
 - Trapping and relocation shall be conducted by a qualified biologist holding a valid section 10(a)1(a) recovery permit from USFWS and valid scientific collection permits from CDFW. Trapping and relocation shall occur between May 1 and

January 15 so as to avoid pupping season and potential detrimental effects on young litters.

- Den sites where San Joaquin kit fox are captured shall be inspected with a burrow scope the morning following capture. If no animals are present in the burrow, the burrow shall be hand excavated by a qualified biologist.
- A biological monitor shall be present during all project-related activities that may result in take of covered species. Monitoring reports shall be prepared to comply with USFWS and CDFW standards.

MM 4.4-9: Prior to the disturbance of the proposed stockpile areas – as part of the overall coordination that is required with USFWS and CDFW to authorize take of other species – the project proponent shall consult with the agencies about Tipton kangaroo rat. The intent of the project is to utilize the onsite avoidance as mitigation for the potential loss of kangaroo rat habitat. If additional mitigation is needed pursuant to obtaining take authorization, then the project proponent will identify offsite conservation lands for the Tipton kangaroo rat

The following measures shall apply to Tipton Kangaroo rat, as needed, prior to the disturbance of the proposed stockpile areas:

- a) If the Tipton kangaroo rat can be confirmed absent from the project site through focused surveys, then the additional measures would not apply to the project. If needed, a qualified biologist holding a valid section 10(a)1(a) recovery permit from USFWS and valid scientific collection permits from CDFW shall conduct a small mammal trapping effort, for the purposes of detecting presence (specifically, *Dipodomys* sp.) within areas of suitable habitat that occur within the project's proposed disturbance footprint. The trapping effort is to be conducted in accordance with USFWS's Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats (2013). Per the protocol, the trapping effort is to be conducted between April 1 and October 31 and is to comprise five consecutive trapping nights. Trapping shall end upon the first capture of a Tipton kangaroo rat individual.
- b) The project proponent shall prepare a Mitigation Plan to address all avoidance and minimization measures, habitat mitigation, and potential relocation needs for all applicable special-status animals to be impacted by the project, including potentially for the Tipton kangaroo rat. The Mitigation Plan shall be provided to the USFWS and CDFW for review and approval as part of the agency consultation process. The Mitigation Plan shall address any other measures needed, including additional pre-construction surveys, exclusionary measures to prevent impacts to individuals within the preservation area, and biological monitoring.
- c) The Mitigation Plan will specifically address trapping and relocation of the kangaroo rat. Trapping and relocation would include the following specific measures:
 - Exclusion fencing shall be installed (buried > 24 inches deep and a minimum of 36 inches high) around the perimeter of the project's proposed disturbance footprint. Installation of the exclusion fence shall avoid potential Tipton kangaroo rat burrows by > 25 feet.

- Trapping and relocation shall be conducted by a qualified biologist holding a valid section 10(a)1(a) recovery permit from USFWS and valid scientific collection permits from CDFW.
- All burrows where small mammals are captured shall be inspected with a burrow scope the morning following capture. If no animals are present in the burrow, the burrow shall be hand excavated by a qualified biologist.
- A biological monitor shall be present during all project-related activities that may result in take of covered species. Monitoring reports shall be prepared to comply with USFWS and CDFW standards.

MM 4.4-10: The following provides measures to confirm the presence/absence of burrowing owls at the site, and measures to be implemented if burrowing owls were detected within the project impact area prior to disturbance. Even if protocol burrowing owl surveys were to be conducted and no owls were detected at the site, pre-disturbance surveys would still be required prior to site disturbance in areas of suitable habitat, and the listed mitigation measures would be implemented at that time if owls were present prior to disturbance.

- a) If protocol presence/absence surveys are deemed necessary, then the breeding season surveys shall be conducted in accordance with protocols identified by 2012 CDFW Staff Report on Burrowing Owl Mitigation. A minimum of four survey visits are required per survey polygon, with at least one site visit to be conducted between February 15 and April 15 and three additional survey visits at least three weeks apart from one another, between April 15 and July 15, with at least one visit occurring after June 15.
- b) Regardless of the result of any focused breeding season burrowing owl surveys conducted for the project site, pre-disturbance surveys shall be conducted prior to any disturbance at the site. At least one survey shall be performed no more than 30 days prior to disturbance of the site. If burrowing owls are present within the disturbance area, then the owls shall be relocated from the project site outside of the breeding season following accepted protocols after obtaining approval from CDFW.
- c) If burrowing owls are present within the project site at the time of disturbance, then the owls shall be passively relocated from the site to the adjacent preservation area. A qualified biologist shall prepare a Burrowing Owl Relocation and Protection Plan that shall document the relocation procedures. The Plan shall be submitted to CDFW for review and approval prior to relocating burrowing owls. Passive relocation shall be performed outside of the breeding season (October 1 to January 31), unless a qualified biologist verifies through non-invasive methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Relocation during the breeding season must be approved by CDFW. Prior to performing the relocation, the biologist shall ensure that the adjacent relocation area contains suitable burrows at a 2:1 ratio over the number of occupied burrows to be impacted. If the relocation site does not contain enough natural burrows, then artificial burrows can be created. Until burrowing owls can be excluded from the impact area, the occupied burrows must be avoided with adequate

buffers. During the breeding season, the avoidance buffer shall be as high as 500 meters depending on the type of disturbance occurring adjacent to the occupied habitat.

MM 4.4-11: In order to avoid impacts to nesting birds, the project shall implement the following measure, prior to site disturbance:

- a) If feasible, vegetation clearing should be conducted outside of the nesting season (February 1 through September 15).
- b) If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within three days prior to any disturbance of the site, including disking, demolition activities, and grading. If active nests are identified, the biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.

MM 4.4-12 In order to reduce and/or avoid indirect impacts to species with the potential to occur within avoided areas the project will implement the following measures to address noise, lighting, dust deposition and drainage, respectively:

- a) Several listed and non-listed species that occur or have the potential to occur within avoided areas on site and within adjacent habitat off site have the potential to be adversely affected by noise associated with construction activities. Proposed noise generating construction adjacent to avoided areas and off-site areas shall incorporate setbacks, berms or walls to minimize the effects of noise on species that have the potential to occur within adjacent areas pursuant to applicable rules, regulations and guidelines related to land use noise standards.
- b) Several listed and non-listed species that occur or have the potential to occur within avoided areas on site and within adjacent habitat off site (San Joaquin kit fox, giant kangaroo rat, and Tipton kangaroo rat) exhibit nocturnal hunting and foraging behaviors and have the potential to be adversely affected by artificial lighting. As a means to avoid adverse impacts to such species, construction of the proposed stockpile locations will be restricted to daylight hours and will not utilize artificial lighting.
- c) The project will implement dust control measures pursuant to MM 4.2-1. Additionally, sediment fencing will be erected along the perimeter of the proposed stockpile locations and access roads to prevent dust from blowing into avoided areas and adjacent habitat off site.
- d) The project will implement measures required through the National Pollutant Discharge Elimination System (NPDES) requirements – specifically, a Storm Water Pollution Prevention Plan (SWPPP) – to ensure that the quantity and quality of runoff discharged to avoided areas and adjacent habitat offsite is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of surface runoff from construction areas into avoided areas and adjacent habitat offsite where sensitive species have the potential to occur.

Level of Significance after Mitigation

With implementation of Mitigation Measure 4.4-1 through MM 4.4-12, impacts to special-status species 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, or jurisdictional waters, identified in local or regional plans, policies, or regulations or by CDFW or USFWS.

The proposed project would not impact any riparian habitat. As discussed in Section 4.4.2, *Jurisdictional Waters*, there are no jurisdictional wetlands on the project site. As part of the project design, the proposed stockpile areas were located to avoid the existing jurisdictional features. The project would not affect waters of the U.S. There are approximately 3.70 acres of RWQCB jurisdiction located south of the proposed stockpile area, but it does not consist of jurisdictional wetlands (Figure 4.4-2). CDFW jurisdiction within the project site occurs south of the proposed stockpile area and totals approximately 8.05 acres, none of which consists of jurisdictional riparian resources (Figure 4.4-3).

The proposed project would not impact any sensitive vegetation communities. As discussed in Section 4.4.2, three types of vegetation communities are found on the project site. As shown in Table 4.4-6 *Summary of Vegetation/Land Use Impacts* and discussed in the analysis for Impact 4.4-1, the proposed project would result in approximately 129 acres of permanent impact to vegetation on the project site, but does not include impacts to sensitive vegetation communities.

In compliance with National Discharge Elimination System (NPDES) General Construction Permit requirements, the applicant would be required to devise and submit a site-specific Storm Water Pollution Prevention Program (SWPPP) to minimize the discharge of wastewater during construction. The SWPPP includes steps for implementation of best management practices (BMPs) aimed at sediment control and erosion control, and could include soil stabilization, silt fencing, straw bale and temporary catch basins. These BMPs would be implemented during construction of the proposed project as a condition of required permits, therefore minimizing soil erosion in jurisdictional waters to the extent feasible.

Construction activities for the proposed stockpiles could indirectly affect waters of the state. Impacts to non-federal waters would be potentially significant. Avoidance measures incorporated into MM 4.4-13 would result in a less-than-significant impact.

Mitigation Measures

Kern County

- MM 4.4-13:** Prior to issuance of any grading or building permit for the expansion site (stockpile area), the project proponent/operator shall submit a final Jurisdictional Delineation report. A copy of this report shall also be provided to the Central Valley Regional Water Quality Control Board (RWQCB) and the County. The following measures shall be implemented:
- a) Avoidance of non-federal waters identified in the final Jurisdictional Delineation.
 - b) Preparation and implementation of a SWPPP, per Mitigation Measure 4.4-12.

- c) Any material/spoils generated from project activities shall be located away from jurisdictional areas and protected from storm water run-off using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- d) Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage from contaminating the ground and generally at least 50 feet from the top of bank.
- e) Any spillage of material will be stopped if it can be done safely. The contaminated area will be cleaned and any contaminated materials properly disposed. For all spills, the project foreman or designated environmental representative will be notified.

Level of Significance after Mitigation

With implementation of Mitigation Measures 4.4-13, impacts on jurisdictional waters would be less than significant.

Impact 4.4-3: The project would not 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.

Isolated waters within the Central Valley Region, including those on the project site, are not considered “waters of the United States” and therefore are not subject to regulation under the federal Clean Water Act (CWA). In addition, no areas were identified on the project site that exhibit characteristics of wetlands as defined by USACE. Therefore, the proposed project would have no impact on federally protected wetlands.

Mitigation Measures

No mitigation measures required.

Level of Significance

No impact would occur.

Impact 4.4-4: The project would interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Habitat linkages are areas which provide a communication between two or more other habitat areas which are often larger or superior in quality to the linkage. Such linkage sites can be quite small or constricted, but can be vital to the long-term health of connected habitats. Linkage values are often addressed in terms of “gene flow” between populations, with movement taking potentially many generations. Given that the project site is surrounded by adjacent agriculture to the north and west, extensive oil extraction activities to the south, and the California Aqueduct and agriculture to the east, the project site does not function as a critical habitat linkage.

Corridors are similar to linkages but provide specific opportunities for individual animals to disperse or migrate between areas, generally extensive but otherwise partially or wholly separated regions. Adequate cover and tolerably low levels of disturbance are common requirements for corridors. Habitat in corridors may be quite different than that in the connected areas, but if used by the wildlife species of interest, the corridor will still function as desired. Given that the project site is surrounded by adjacent agriculture to the north and west, extensive oil extraction activities to the south, and the California Aqueduct and agriculture to the east, the project site does not function as a wildlife corridor.

Wildlife nurseries are sites where wildlife concentrate for hatching and/or raising young, such as rookeries, spawning areas, and bat colonies. Nurseries can be important to both special-status species as well as commonly occurring species. The project site has the potential to support nesting birds.

The project has the potential to impact active bird nests if vegetation is removed during the nesting season (February 1 to August 31). Impacts to nesting birds are prohibited by the MBTA and California Fish and Game Code. Although impacts to native birds are prohibited by MBTA and similar provisions of California Fish and Game Code, impacts to native birds by the proposed project would not be a significant impact under CEQA. The native birds with potential to nest on the project site would be those that are extremely common to the region and highly adapted to human landscapes (e.g., house finch, killdeer). The number of individuals potentially affected by the project would not significantly affect local or regional populations of such species. Mitigation Measure 4.4-11 would ensure compliance with the MBTA.

Mitigation Measures

Kern County

Implement Mitigation Measure 4.4-11.

Level of Significance after Mitigation

Implementation of Mitigation Measures 4.4-11 would reduce impacts wildlife nursery sites to a less-than-significant level.

Impact 4.4-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Based on the review of all local policies and ordinances identified in Section 4.4.3 *Regulatory Setting*, the proposed project would not conflict with any local policies or ordinances protecting biological resources. The General Plan policies identified in Section 4.4.3, *Regulatory Setting; Local* would be applicable to the proposed project. No other local plans, policies, or ordinances would be applicable. The proposed project would comply with the policies of the General Plan Section 1.10.5 *Threatened and Endangered Species* by complying with the federal, state and local regulations laid out in Section 4.4.3 of this EIR Section. The proposed project would not conflict with the policies pertaining to tree conservation laid out in the General Plan Section 1.10.10 *Oak Tree Conservation*, because no oak trees were identified on the project site. Therefore, the proposed project would have a less-than-significant impact related to a potential conflict with local policies or ordinances protecting biological resources and no mitigation would be required.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.4-6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan.

There is no adopted HCP, natural community conservation plan or other approved State, regional, or local HCP protecting biological resources on the project site. The KCVFHCP is a proposed HCP and has not been approved by the County or resource agencies. Therefore, KCVFHCP does not constitute an adopted HCP and the project is not required to analyze conflicts with the KCVFHCP. The project would not conflict with the provisions of an adopted HCP, natural community conservation plan, or other approved State, regional, or local HCP, and no impact would occur.

Mitigation Measures

No mitigation measures required.

Level of Significance

No impact would occur.

Impact 4.4-7: The project would contribute to cumulative biological resource impacts.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

Cumulative impacts for a project would be significant if the incremental effects of the individual project are considerable when combined with the effects of past projects, other current projects, and probable future projects.

As large-scale industrial projects and urbanization pressures increase within Kern County, impacts to biological resources within the region are expanding on a cumulative level. As described in Table 3-8, *Cumulative Projects List*, in Chapter 3, *Project Description*, of this EIR, other projects that could have similar species effects have been completed or are proposed within the southern San Joaquin Valley. In general, bioregions are defined through physical and environmental features, including watershed boundaries and soil and terrain characteristics. The project site lies within the Antelope Plain in the southwestern perimeter of the San Joaquin Valley, east of the Temblor Mountain Range. The Temblor Mountain Range and the boundaries of the Valley Region serve as natural boundaries that separate different bioregions. Cumulative projects in different bioregions may not contribute to impacts on the same species.

The cumulative projects identified in Table 3-8 have the potential to affect similar habitat types and special status species. These projects, in combination with the proposed project, may result in cumulative impacts to special status species, either directly, or through the cumulative loss of foraging and nesting habitat. The project's contribution to cumulative impacts would be reduced to less than considerable by Mitigation Measures 4.4-1 through 4.4-11. The project would not contribute to cumulative impacts to jurisdictional waters, special habitat, or wildlife corridors/nursery sites, as described above.

Mitigation Measures

Implementation of Mitigation Measures MM 4.1-1 and MM 4.4-1 through MM 4.4-11.

Level of Significance after Mitigation

Cumulative impacts would be reduced to a less-than-significant level.

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4.5.1 Introduction

This section provides contextual background information on cultural resources in the project site, including the site's prehistoric, ethnographic, and historical settings of the region. This section also summarizes the results of a cultural resources assessment, including a records search, cultural resources survey of the project site, and significance evaluation of identified resources.

This section is based on a cultural resources technical report entitled, *Revised Archaeological and Paleontological Study for Clean Harbors Buttonwillow, LLC. Nonhazardous Waste Disposal Landfill Project, Kern County*, prepared by Discovery Works in 2019, which details the results of a cultural resources records search, field survey, and resource evaluation for the project and is provided in Appendix E of this EIR. The Study was 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 site. Due to the confidential nature of the location of cultural resources, information regarding locations of cultural resources has been removed from the report and is not included in Appendix E.

For the purposes of CEQA, "cultural resources" generally refer to prehistoric and historical archaeological sites and the built environment. Cultural resources also include areas that are of cultural significance to, or affiliated with, California Native American tribes. Project impacts to tribal cultural resources are evaluated in Section 4.16, Tribal Cultural Resources, of this EIR.

Cultural Resource Terminology

For the purposes of CEQA, "cultural resources" generally refer to prehistoric and historical archaeological sites, isolates, and the built environment. Cultural resources can also include areas determined to be important to Native Americans.

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 river beds, 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, or nonutilitarian objects), features (e.g., remnants of walls, cooking hearths, or midden deposits), and ecological evidence (e.g., pollen remaining from plants that were in the area when the activities occurred).

- **Prehistoric archaeological sites** generally represent the material remains of Native American groups and their activities dating to the period before European contact. In some cases, prehistoric sites may contain evidence of trade contact with Europeans.
- **Ethnohistoric archaeological sites** are defined as Native American settlements occupied after the arrival of European settlers in California.

- **Historic period archaeological sites** reflect activities during the Historic period.

Artifact: An object that has been made, modified, or used by a human being.

Cultural Resource: Cultural resources are expressions of human culture and history in the physical environment, and may include archaeological sites, buildings, structures, objects, districts, works of art, architecture, and natural features that were important in past human events. They may consist of physical remains, but also may include areas where significant human events occurred, even though evidence of the events no longer remains. Cultural resources also include places that are considered to be of traditional cultural or religious importance to social or cultural groups.

Cultural Resources Survey Area: All areas of potential permanent and temporary project impacts.

Ethnographic: Relating to the study of human cultures. “Ethnographic resources” represent the heritage resource of a particular ethnic or cultural group, such as Native Americans or African, European, Latino, or Asian immigrants. They may include traditional resource-collecting areas, ceremonial sites, value-imbued landscape features, cemeteries, shrines, or ethnic neighborhoods and structures.

Historic period: The period that begins with the arrival of the first nonnative population and thus varies by area. In 1772, Commander Don Pedro Fages was the first European to enter Kern County, initiating the historic period in the project study area.

Historical Resource: This term is used for the purposes of CEQA and is defined in the *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 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.

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 (isolates were defined as less than three artifacts within 30 meters of each other). 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 (PRC Section 21083.2 and *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 in the geologic time scale of the 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.

Stratigraphy: The natural and cultural layers of soil that make up an archaeological deposit, and the order in which they were deposited relative to other layers.

Tribal Cultural Resource: These are defined in Assembly Bill 52 (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 § 21074 (a)(1)).

Unique Archaeological Resource: This term is used for the purposes of CEQA and is defined in PRC Section 21083.2(g) 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 and that there is 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.

4.5.2 Environmental Setting

The project site is located in the southern San Joaquin Valley in unincorporated Kern County, California. The southern San Joaquin Valley borders the northern margin of the Tehachapi Mountains, within California’s Central Valley, which extends from the Siskiyou Mountains in the north to the Tehachapi Mountains in the south and covers an area approximately 450 miles long and 250 miles wide. The Central Valley is bound by the Cascade Ranges and Sierra Nevada in the east, and the Coast Ranges in the west.

The project site is located within a dissected alluvial plain, known as Antelope Plain, on the southwestern flank of the San Joaquin Valley. Erosional deposits from the Temblor Range to the west over the project site. The project site is located 25 miles west of Bakersfield city limits and on the northside of Lokern Road.

Archaeological Setting

Early archaeological investigations of the Southern San Joaquin Valley indicate human habitation for at least 8,000 years. Archaeological sites around the two major lakes in this area, Tulare and Buena Vista, confirm the early use of this region. Early hunter-gatherers found numerous resources around the lakes and marshes on the valley floor such as large game animals. Occupation sites along Buena Vista Lake that date 4,000 years ago, have yielded stone gridding implements which show a shift in substance use of these lakes and marshes. By the historic period, A.D. 1400-1700, the Yokuts Indians occupied the area (Appendix E).

Ethnographic Setting

Alfred L. Kroeber (1925), Willian Wallace (1978) and Richard H. Osborne (1992) provide descriptions of the life ways of the Southern Valley Yokuts. They list at least 15 different Yokuts groups for this lake and marsh region. The group known as the Chuxoxi (or Tuhohi according to Kroeber 1925: plate 47, as cited in Appendix E) lived in the area of the Kern River delta, which much later includes the present-day project site. Each Yokuts group spoke a different dialect but lived a similar life style. “Fishing, hunting waterfowl,

and collecting shellfish, roots and seeds” formed their basic economy (Wallace 1978: 449-450, as cited in Appendix E). Given the location of their villages, tule provided much of their materials for storage of baskets, cookware, roof structures, and balsa boats. They obtained stone implements for grinding and cutting tools by trade. Most of the Southern Valley Yokuts lived in villages that “were often divided into two groups called moieties” (Osborne 1992:46, as cited in Appendix E). These moieties followed the man’s lineage and each was represented by a totem animal which included several groups of families or clans (Appendix E).

By 1850, the Yokuts population in the Buena Vista Lake region had declined from an estimate of 1,300 to 280. European diseases and forced removal by the Spanish Franciscan missions greatly impacted these native Indians. Also, the wide-open landscape where they lived provided little shelter from the numerous Euro-Americans coming during the gold rush and later settlers to the region. Today, many decedents of the Yokuts live in Tulare County and on the Tule River Indian Reservation located on the South Fork of the Tule River (Appendix E).

Existing Cultural Resources

To evaluate the project’s potential effects on significant cultural resources, a cultural resources study for the project was prepared, which included a records search, Native American outreach, a historic map review, and a pedestrian survey (Appendix E). The methodology and results of Discovery Works’ study are summarized below.

Records Search

A cultural resources record search for the project site was conducted by Discovery Works at the Southern San Joaquin Valley Information Center (SSJVIC) housed at the California State University, Bakersfield on January 3, 2019. The record searches included a review of all previous cultural resources studies, recorded archaeological resources, and built-environment resources. The results of the SSJVIC records search indicated that the existing Facility and the acreage outside the current eastern fence previously had been surveyed for archaeological resources (Schiffman 1987 and 1992, cited in Appendix E). The records also indicated that one prehistoric site was located within 500 feet of the proposed east border of the project site. Unfortunately, SSJVIC had no site record or sketch map for this site; only a brief written description. In 1987, Schiffman describes this prehistoric site as “a sparse to light flake scatter that covers most of the southeast portion of the [then 320 acres] project” (Schiffman 1987:3, as cited in Appendix E). Two other archaeological surveys also inspected portions of the project site. In 1982, Schiffman conducted a linear survey along Lokern Road which passed the southern border of the project site. In 1999, a linear survey of a potential fiber optic cable project from San Luis Obispo to Bakersfield, which passed through the solid waste Facility site on the diagonal from northwest to southeast and extends outside the existing Facility and between the proposed stockpile areas 2 and 3. The easement along this fiber optic cable is visible on the ground.

Historic Map Review

USGS topographic maps were reviewed for potential historic structures within the project site. These maps included the 1910 edition, *McKittrick* USGS 15’ topographic quadrangle and the 1934 edition, *Lokern* USGS 1/31, 680 scale topographic map. Neither map showed evidence of structures on the project site.

Cultural Resources Surveys

A pedestrian survey of the project site, including the northwest portion where three new non-hazardous waste landfill units are proposed, and the eastern portion of the project site where the stockpile areas are proposed, was conducted on January 10, 2019 (Appendix E). Discovery Works also conducted a desktop review of the area proposed for four new hazardous waste tank treatment buildings and latex paint recycling building on March 20, 2019.

Discovery Works conducted a windshield survey of the proposed expansion area for three new non-hazardous waste landfill units because the entire area was previously graded in 1986 and 1987.

A three-person team conducted a pedestrian archaeological field survey in the eastern portion of the project site where the permitted Facility would be expanded to accommodate a soil stockpiles area. The survey was conducted using parallel transects at 10- to 25-meter-wide intervals. The survey area was inspected for any evidence of prehistoric resources such as chipped stone tools, stone manufacturing debris, gridding implements, faunal remains or bedrock mortars and historic resources that date older than fifty years such as foundations, concentrations of historic debris, or structural remains. The survey area was relatively undisturbed and primarily covered by low-lying salt-brush/rabbit bush vegetation and rodent burrows. Ground visibility increased from north to south with 75 percent in the proposed stockpile 1 area and 90 percent visibility in the proposed area for stockpiles 2, 3, and 4. Topographically, the study area slopes slightly downward from the southeast with elevation from approximately 412 to 355 feet above mean sea level.

Cultural Resources Recorded within the Project Site

No cultural resources were identified as a result of the cultural resources survey. Based on the record search at SSJVIC, one prehistoric site was located within 500 feet of the proposed east border of the project site; however, SSJVIC had no site record or sketch map that could be confirmed. During the survey two isolated historic artifacts were identified; a cone-top beer can that dates to 1937 to mid-1950s and a brown hip-flask style liquor bottle that dates to 1956. Isolated artifacts, by their nature, lack archaeological context and therefore generally do not provide sufficient information to be considered significant resources. Pieces of unmodified chert and chert-like shale fragments in the survey area showed no indications of prehistoric use.

Potential for Unknown Buried Cultural Resources

The project site is located in the gently sloping Antelope Plan, which is a dissected alluvial plain on the southwestern flank of the San Joaquin Valley (Appendix E). Erosional deposits from the Temblor Range to the west covers the project site. The upper deposits of alluvium date to the Quaternary and are approximately 100 feet thick. Below these sediments are the Plio-Pleistocene-aged deposits of the Tulare Formation. Based on the findings of the Discovery Works cultural study, geologic cross sections A-A' and B-B', construction of the proposed expansion of non-hazardous waste landfill units may excavate the silt layer and encounter the sand layer, which could expose the older Quaternary-age sediments.

4.5.3 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 National Register of Historic Places (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, as cited in Appendix E):

- **Criterion A:** Are associated with events that have made a significant contribution to the broad patterns of our history;
- **Criterion B:** Are associated with the lives of persons significant in our past;
- **Criterion 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
- **Criterion 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. 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, as cited in Appendix E). The NRHP recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects, which

include location, setting, design, materials, workmanship, feeling, and association. 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 (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

Created in 1992 and implemented in 1998, the CRHR is “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:

- It is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
- It is associated with the lives of persons important in our past.
- 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.
- 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.

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 are also listed in the CRHR. No historical 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 an historical resource is a project that may have a significant effect on the environment. The *CEQA Guidelines* (Title 14 CCR Section 15064.5) recognize that an 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 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 Section 21084.1 of CEQA and Section 15064.5 of the *CEQA Guidelines* apply. If a project may cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired) in the significance of an historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (*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 *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 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 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 (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.

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 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

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 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

1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation

Policy

Policy 25. The County will promote the preservation of cultural and historic resources that provide ties with the past and constitute a heritage value to residents and visitors.

Implementation Measures

Measure K: Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.

Measure L: The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.

Measure M: In areas of known paleontological resources, the County should address the preservation of these resources where feasible.

Measure N: The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.

Measure O: On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.

4.5.4 Impacts and Mitigation Measures

Methodology

The proposed project's potential impacts to cultural resources have been evaluated using a variety of sources. To evaluate the project's potential effects on significant archaeological and historic built environment resources, Discovery Works conducted a cultural resources study of the project site, which included a records search and cultural resources survey (Appendix E). Based on these data, impacts were analyzed according to CEQA significance criteria described below.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

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

A project would have a significant adverse effect on cultural resources if it would:

- a. Cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.4;

- b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.4;
- c. Disturb any human remains, including those interred outside of dedicated cemeteries.

All of the above impact thresholds are addressed in the “Project Impacts” section below. Impacts to tribal cultural resources have been addressed in Section 4.16, *Tribal Cultural Resources*, of this EIR.

Project Impacts

Impact 4.5-1: The project could cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.5.

As a result of the cultural resources survey conducted for the project, two isolated historic artifacts were identified; a cone-top beer can that dates to 1937 to mid-1950s and a brown hip-flask style liquor bottle that dates to 1956. Isolated artifacts, by their nature, lack archaeological context and therefore generally do not provide sufficient information to be considered significant resources. As such, the isolates documented as part of the survey are recommended not eligible for listing in the CRHR, and do not qualify as historical resources pursuant to CEQA. No built environment resources were identified during the record search or cultural survey.

Although no known subsurface historical resources were identified within the project site, there is the potential for unknown subsurface cultural resources that qualify as historical resources to exist within the project site. Additionally, due to the presence of vegetation on the proposed soil stockpile area, buried remains which go undetected during a surface survey, could be uncovered during ground disturbing activities such as scraping and grading. Buried remains include resources such as hearths, stone artifacts, or other historic or prehistoric activity features. Should subsurface archaeological resources be present within the project site, they may qualify as historical resources pursuant to CEQA and could be subject to potential impacts as result of project implementation. Therefore, the project has the potential to cause a substantial change in the significance of a historical resource, and a qualified archaeologist should be retained by the project and an Inadvertent Discovery Plan should be prepared to ensure that any unanticipated cultural resources discovered during construction and operation of the project are appropriately treated. Implementation of Mitigation Measure 4.5-1 would reduce potential impacts to unrecorded archeological resources to a less-than-significant level.

Mitigation Measures

MM 4.5-1. In the event archaeological materials are encountered during the course of grading or construction, the project contractor shall cease any ground disturbing activities within 50 feet of the find. A qualified archaeologist shall evaluate the significance of the resources and recommend appropriate treatment measures. Per CEQA Guidelines Section 15126.4(b)(3), project redesign and preservation in place shall be the preferred means to avoid impacts to significant historical resources. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures in consultation with the County, which may include data recovery or other appropriate measures. The County

shall consult with appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature. Archaeological materials recovered during any investigation shall be curated at an accredited curation Facility. The qualified 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.

Steps to Compliance:

- (a) This mitigation measure shall be incorporated as a condition of approval.
- (b) In the event archaeological materials are encountered during the course of grading or construction activities, the project proponent shall retain a qualified archaeologist to evaluate the significance of the resources and recommend appropriate treatment measures.
- (c) The Planning and Community Development Department shall review and approve all reports, correspondence, and determinations regarding historical resources prepared by the qualified archaeologist.
- (d) Kern County Building Inspectors will verify compliance with the mitigation measure in the field prior to and during the construction period.

Level of Significance

With implementation of the Mitigation Measure 4.5-1, impacts would be less than significant.

Impact 4.5-2: The project could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.

No archaeological resources were identified as a result of the cultural resources record search or field survey. Based on the record search at SSJVIC, one prehistoric site was previously recorded, located within 500 feet of the proposed east border of the project site; however, SSJVIC had no site record or sketch map that could be confirmed. The field survey found no indications of prehistoric use of the area.

As discussed previously under Impact 4.5-1, there also is a potential for the project to impact previously unknown, buried archaeological deposits. Additionally, due to the presence of vegetation on the proposed soil stockpile area, buried remains which go undetected during a surface survey, could be uncovered during ground disturbing activities such as scraping and grading. Buried remains include resources such as hearths, stone artifacts, or other prehistoric activity features. In the event that unknown archaeological resources are discovered during project construction, significant impacts could occur. However, with implementation of Mitigation Measure MM 4.5-1, which requires appropriate treatment of unearthed archaeological resources during construction, potential impacts would be reduced to less than significant.

Mitigation Measures

Implementation of Mitigation Measure 4.5-1 would be required.

Level of Significance after Mitigation

With implementation of the Mitigation Measure 4.5-1, impacts would be less than significant.

Impact 4.5-3: The project could disturb human remains, including those interred outside of formal cemeteries.

There is no indication, either from the archival research results or the archaeological survey, that any particular location within the project area has been used for human burial purposes in the recent or distant past. However, in the event that human remains are inadvertently discovered during project construction activities, the human remains could be damaged or disturbed, which would be a significant impact. Implementation of Mitigation Measure MM 4.5-2 would ensure that any human remains encountered during Project implementation are properly treated, thus reducing impacts to a less than significant level.

Mitigation Measures

MM 4.5-2: If human remains are uncovered during project construction, the project contractor shall immediately halt work within 100 feet of the find, contact the Kern County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.4 (e)(1) of the California Environmental Quality Act Guidelines. If the County Coroner determines that the remains are Native American, the coroner shall contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by Assembly Bill 2641). The Native American Heritage Commission shall designate a Most Likely Descendent for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendent regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et. seq.) directing identification of the next-of-kin will apply.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.5-2, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

An analysis of cumulative impacts takes into consideration the projects identified in Table 3-8 of this EIR. In addition, the geographic area of analysis of cumulative impacts for cultural resources includes the southern San Joaquin Valley, which includes the southeast portion Kern County, where the project site is located. This geographic scope of analysis is appropriate because the archaeological and historical resources within this area are expected to be similar to those that occur on the project site because of their proximity, and because the similar environments, landforms, and hydrology would result in similar land uses, and thus, site types.

Further, this is a large enough area to encompass any effects of the project on cultural resources that may combine with similar effects caused by other past, current, and reasonably foreseeable future projects, and provides a reasonable context wherein cumulative actions could affect cultural resources. Cumulative impacts to cultural resources could occur if other related projects, in conjunction with the proposed project, had or would have impacts on cultural resources that, when considered together, would be significant.

Development of the proposed project, in combination with other projects in the area, has the potential to contribute to a cumulatively significant cultural resources impact due to the potential loss of historical and archaeological resources unique to the region. However, no significant historic or prehistoric resources were identified within the project site, and mitigation measures are included in this EIR to reduce potentially significant impacts to unknown archaeological resources that could be encountered during construction of the proposed project.

With implementation of Mitigation Measures MM 4.5-1 through MM 4.5-2 as described above, the project would not result in significant impacts to cultural resources. Given this minimal impact, as well as similar mitigation requirements for other projects in the southern San Joaquin Valley, cumulative impacts to cultural resources would be less than significant.

Mitigation Measures

Implementation of Mitigation Measures MM 4.5-1 through MM 4.5-2 would be required.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.5-1 through MM 4.5-2, impacts would be less than significant.

4.6.1 Introduction

This section of the Environmental Impact Report (EIR) analyzes the energy implications of the project, focusing on the following three energy resources: electricity, natural gas, and transportation-related energy (fossil fuels). This section includes a summary of the project's anticipated energy needs and conservation measures. Information in this section is primarily based on the *WMU 36, 37 & 38 Non-Hazardous Waste Disposal Landfill Project Energy Technical Report* prepared by Ramboll, US Consulting, provided in Appendix F of this EIR. In addition, the information found herein, as well as other aspects of the project's environmental-related energy impacts, are discussed in greater detail elsewhere in this EIR, including in Chapter 3, *Project Description*, Section 4.3, *Air Quality*, and Section 4.8, *Greenhouse Gas Emissions*.

This section provides the content and analysis required by Public Resources Code (PRC) Section 21100(b)(3) and described in State CEQA *Guidelines* Appendix F (AEP 2018). PRC Section 21100(b) and State CEQA *Guidelines* Section 15126.4 require that an EIR identify mitigation measures to minimize a project's significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F states that the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the Project Description, Environmental Setting, and Impact Analysis portions of technical sections, as well as through mitigation measures and alternatives.

In late 2018, the California Natural Resources Agency finalized updates to the 2018 *CEQA Guidelines* (California Natural Resources Agency 2018). Appendix G was amended to now include the analysis of energy. Previously included in Appendix F, the Appendix G Checklist now provides questions asking if a project could result in wasteful energy resource consumption during project construction or operation and whether the project conflicts with state or local renewable energy or energy efficiency plans (CNRA 2018).

One comment letter was received in response to the Notice of Preparation which raised electricity usage as an issue. The letter, from Association of Irrigated Residents, is saved, along with all other scoping comment letters, in Appendix A of this EIR.

4.6.2 Environmental Setting

Among the states, California ranks fourth in the nation in production of crude oil, 15th in production of natural gas, second in generation of hydroelectric power, 15th in electricity generation from nuclear power, second in net electricity generation from all other renewable energy sources besides hydroelectric, and first as a producer of electricity from biomass, geothermal, and solar energy. California produces approximately 10% of the natural gas used in the state; approximately 90% of the natural gas used in California is imported from Canada, the Southwest, and the Rocky Mountains region of the United States. Over half of the crude oil refined in California is from foreign countries, including Saudi Arabia, Ecuador, and Colombia.

Additional crude oil is imported from Alaska. Over one-fourth of California's electricity is from out-of-state locations in the Pacific Northwest and the Southwest (Appendix F).

Kern County possesses a wealth of existing and potential energy resources. The County's role as a major oil, natural gas, and electricity producer, along with its geographic position at the heart of California and on the boundaries of the State's largest gas and electric utilities, gives the County's future energy development Statewide significance.

Electricity

Electricity, a consumptive utility, is a manmade resource. The production of electricity requires the consumption or conversion of energy resources—which may include water, wind, oil, gas, coal, solar, geothermal, and nuclear resources—into energy. The delivery of electricity involves several system components for distribution and use. The electricity generated is distributed through a network of transmission and distribution lines, commonly called a power grid.

Energy capacity, or electrical power, is generally measured in watts (W), while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If 10 100-W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is 1 million W, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is 1 billion Wh.

According to the California Energy Commission (CEC), Californians consumed 272,576 GWh of electricity in 2020 (CEC 2022). Of this total, Kern County consumed a total of 14,966 GWh from which 2,638 GWh was for residential uses and 12,328 GWh was for non-residential uses (CEC 2022). Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita in the residential sector is lower than any other state except Hawaii (EIA 2018).

Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, however, California's electrical system has become more reliant on renewable energy sources, including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, generation of electricity is usually not tied to the location of the fuel source and can be delivered great distances through the electrical grid. Electricity supply in California involves a complex grid of power plants and transmission lines located in the western United States, Canada, and Mexico.

Retail electric service in Kern County is split between Pacific Gas and Electric (PG&E) and Southern California Edison (SCE). PG&E's retail service is concentrated in western Kern County while SCE serves the east County area. PG&E is the primary supplier of electricity to businesses and residents within the project area. PG&E's 70,000-square mile service area covers both Northern and Central California. By the end of 2017, about 33 percent of the energy delivered to PG&E's customers came from eligible renewable energy-related projects (Appendix F). PG&E obtains its energy supplies from power plants and natural gas fields in Northern California, as well as from energy purchased outside its service area and delivered through high-voltage transmission lines and pipelines. Power is generated from various sources, including

fossil fuel, hydroelectric, nuclear, wind, solar, biomass, and geothermal plants, and is fed into the electrical grid system serving its service territory.

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. As with electricity, natural gas usage in California varies substantially by the type of land use, type of construction materials, and the efficiency of all gas-consuming devices in a given building.

The existing Facility does not use natural gas.

Petroleum

According to the U.S. Energy Information Administration, California used approximately 524 million barrels of petroleum in 2020, with the majority (433 million barrels) used for the transportation sector (EIA 2020). This total annual consumption equates to a daily use of approximately 1.46 million barrels of petroleum. There are 42 U.S. gallons in a barrel, so California consumes approximately 65.5 million gallons of petroleum per day, adding up to an annual consumption of approximately 23.6 billion gallons of petroleum. By sector, transportation uses utilize approximately 82.6% of the state's petroleum, followed by 13.0% from industrial, 3.1% from commercial, 0.01% from residential, and a negligible amount from electric power uses (EIA 2020). Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel. California has implemented policies to improve vehicle efficiency and to support use of alternative transportation.

California's oil fields make it the third-largest petroleum-producing state in the United States, behind Texas and North Dakota (federal offshore production is the biggest producer in the United States). Crude oil is moved from area to area within California through a network of pipelines that carry it from both onshore and offshore oil wells to the refineries that are located in the San Francisco Bay Area, the Los Angeles area, and the Central Valley. Currently, 16 petroleum refineries operate in California, processing approximately 2.0 million barrels per day of crude oil (Appendix F).

Transportation

According to the U.S. Energy Information Administration (USEIA), transportation is a major end use of energy in California, accounting for approximately 34% of total state-wide energy consumption in 2020, the most recent year for which data is available (Appendix F). In addition, energy is consumed in connection with construction and maintenance of transportation infrastructure, such as streets, highways, freeways, rail lines, and airport runways. California's 30 million vehicles consume more than 16 billion gallons of gasoline and more than 3 billion gallons of diesel in 2016 (Appendix F). Most petroleum fuel refined in California is for use in on-road motor vehicles and is refined within California to meet state-specific formulations required by the California Air Resources Board (ARB). The major categories of petroleum fuels are gasoline and diesel for passenger vehicles, transit, and rail vehicles; and fuel oil for industry and emergency electrical power generation. 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 travelled (VMT). 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 (Appendix F).

Alternative fuels sources for transportation include kerosene, jet fuel, and residual fuel oil for marine vessels and methanol and denatured ethanol (alcohol mixtures that contain no less than 70% alcohol), natural gas (compressed or liquefied), liquefied petroleum gas (LPG), hydrogen, and fuels derived from biological materials (i.e., biomass).

4.6.3 Regulatory Setting

Federal

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 was established in response to the oil crisis of 1973, which increased oil prices due to a shortage of reserves. The Act requires that all vehicles sold in the U.S. meet certain fuel economy goals, known as the Corporate Average Fuel Economy standards. The National Highway Traffic Safety Administration (NHTSA) of the U.S. Department of Transportation (DOT) administers the Corporate Average Fuel Economy program, and the U.S. Environmental Protection Agency (EPA) provides the fuel economy data.

In April 2010, the EPA and NHTSA issued a final rulemaking establishing new federal fuel economy standards for model years 2012 to 2016 passenger cars and light-duty trucks. For model year 2012, the fuel economy standards for passenger cars, light trucks, and combined cars and trucks were 33.3 miles per gallon (mpg), 25.4 mpg, and 29.7 mpg, respectively. These standards increase progressively up to 37.8 mpg, 28.8 mpg, and 34.1, respectively, for model year 2016. In subsequent rulemakings, the agencies extended the national program of fuel economy standards to passenger vehicles and light-duty trucks of model years 2017-2025, culminating in fuel economy of 54.5 mpg by model year 2025, as well as to medium- and heavy-duty vehicles of model years 2014-2018, including large pickup trucks and vans, semi-trucks, and all types and sizes of work trucks and buses.

In August 2016, the EPA and NHTSA adopted the next phase (Phase 2) of the fuel economy and GHG standards for medium- and heavy-duty trucks, which apply to vehicles with model year 2018 and later. In response to the EPA's adoption of the Phase 2 standards, California Air Resources Board (ARB) staff brought a proposed California Phase 2 program before its Board in 2017; and the Board approved the program in March 2018.

In 2018, the EPA and NHTSA proposed to amend certain existing Corporate Average Fuel Economy standards for passenger cars and light trucks and establish new standards, covering model years 2021-2026. Compared to maintaining the post-2020 standards now in place, the proposal would increase U.S. fuel consumption.

In 2019, the EPA and NHTSA announced the One National Program Rule, which allows the federal government to set the standard for uniform fuel economy and greenhouse gas emissions of automobiles and light duty trucks. This rule pre-empts state and local programs from setting the national standard, which includes California's GHG and ZEV programs.

California and other states have announced their intent to challenge federal actions that would delay or eliminate GHG reductions. Because legal challenges to any future adoption of the proposal is likely, the timing and consequences of the pending proposal are speculative at this time.

Energy Policy Act of 2005 and Energy Independence and Security Act of 2007

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the Energy Policy Act, consumers and businesses can attain federal tax credits for purchasing fuel-efficient appliances and products. Because driving fuel-efficient vehicles and installing energy-efficient appliances can provide many benefits, such as lower energy bills, increased indoor comfort, and reduced air pollution, businesses are eligible for tax credits for buying hybrid vehicles, building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are given for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

The Energy Policy Act of 2005 also established the first renewable fuel volume mandate in the United States. The original Renewable Fuel Standard program required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the Energy Independence and Security Act of 2007, the Renewable Fuel Standard program was expanded to include diesel and to increase the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.

American Recovery and Reinvestment Act

The American Recovery and Reinvestment Act of 2009 was passed in response to the economic crisis of the late 2000s, with the primary purpose of maintaining existing jobs and creating new jobs. Among the secondary objectives of the American Recovery and Reinvestment Act was investment in “green” energy programs, including funding the following through grants, loans, or other mechanisms: private companies developing renewable energy technologies; local and state governments implementing energy efficiency and clean energy programs; research in renewable energy, biofuels, and carbon capture; and development of high efficiency or electric vehicles.

Intermodal Surface Transportation Efficiency Act

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 promotes the development of intermodal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. The Intermodal Surface Transportation Efficiency Act contains factors that metropolitan planning organizations (MPO), such as the Kern Council of Governments (Kern COG), are to address in developing transportation plans and programs, including some energy-related factors. To meet the ISTEA requirements, MPOs have adopted explicit policies defining the social, economic, energy, and environmental values that guide transportation decisions in their respective metropolitan areas. The planning process for specific projects would then address these policies. Another requirement of the ISTEA is to consider the consistency of transportation planning with federal, state, and local energy goals. Through this requirement, energy consumption is expected to be a decision criterion, along with cost and other values to determine the best transportation solution.

Transportation Equity Act for the 21st Century

The Transportation Equity Act for the 21st Century (“TEA-21”) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, the Bush Administration issued Executive Order 13432 in 2007 directing the U.S. Environmental Protection Agency (USEPA), U.S. Department of Energy (USDOE), and U.S. Department of Transportation (USDOT) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009 the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency for GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010 President Obama issued a memorandum directing the USEPA, USDOE, USDOT, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for light-duty vehicles with model years 2017–2025. The goal of the proposed standards was to achieve 163 grams/mile of carbon dioxide (CO₂) in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6% to 23% over the 2010 baselines.

State

AB 32 and SB 32 (Statewide GHG Reductions with Energy Co-Benefits)

The California Global Warming Solutions Act of 2006 (AB 32) was signed into law in September 2006. The law instructed ARB to develop and enforce regulations for the reporting and verification of state-wide GHG emissions. The bulk of GHG emissions in California are carbon dioxide that result from fossil fuel consumption. Therefore, a reduction in GHG emissions typically translates into reduced fuel and increased

energy efficiency. The bill directed ARB to set a state-wide GHG emission limit based on 1990 levels, to be achieved by 2020.

AB 32 requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. In December 2008, ARB adopted its Climate Change Scoping Plan: A Framework for Change (Scoping Plan), which included the state's strategies for achieving AB 32's reduction targets. These strategies are implemented with additional rules and regulations of relevance to energy analysis, such as the Advanced Clean Cars Program, the low carbon fuel standard (LCFS), Title 24 building efficiency standards, and the Renewable Portfolio Standard (RPS). These are discussed further below.

Enacted in 2016, Senate Bill (SB) 32 (Pavley, 2016) codifies a 2030 GHG emissions reduction goal and requires ARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. Similar to AB 32, a reduction in GHG emissions typically corresponds with a reduction in energy usage as the bulk of GHGs result from the combustion of fossil fuel.

2018 Integrated Energy Policy Report Update

The 2018 Integrated Energy Policy Report (IEPR) Update provides an assessment of major energy trends and issues for a variety of energy sectors, as well as policy recommendations. Prepared by the California Energy Commission (CEC), this report details the key energy issues facing California and develops potential strategies to address these issues. The 2018 IEPR Update includes a discussion of several strategies to reduce climate change impacts and lessen energy consumption and recommendations for each topic. Examples include a discussion of building decarbonization, strategies to increase energy efficiency, discussion of energy equity, and the impacts of increasing the flexibility of the electricity system. The assessments and forecasted energy demand within this report will be used by the CEC to develop future energy policies.

SB 743 (Transportation Analysis under CEQA)

Public Resources Code Section 21099(c)(1), as codified through enactment of SB 743, was enacted with the intent to change the focus of transportation analyses conducted under the California Environmental Quality Act (CEQA). SB 743 reflects a legislative policy to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions. As finalized in December 2018, amendments to the State CEQA Guidelines adopted in furtherance of SB 743 establish vehicle miles travelled (VMT), in lieu of level of service, as the new metric for transportation analysis. Implementation of SB 743 is anticipated to improve the efficiency of transportation fuels consumption.

SB 375 (Land Use Planning)

SB 375, the Sustainable Communities and Climate Protection Act of 2008, supports the State's climate action goals to reduce GHG emissions through coordinated transportation and land use planning. SB 375 required ARB to establish GHG emission reduction targets (Regional Targets) for each metropolitan planning region. On September 23, 2010, ARB adopted Regional Targets applying to the years 2020 and 2035. In 2011, ARB adopted Regional Targets of 5% for 2020 and 10% for 2035 for the area under the jurisdiction of Kern COG. These targets were in place through September 30, 2018. In March 2018, ARB

approved updated regional targets of 9% for 2020 and 15% for 2035 for Kern COG, which will be applied by Kern COG in future planning cycles.

SB 375 requires MPOs, including Kern COG, to incorporate a “sustainable communities strategy” (SCS) in their regional transportation plans (RTPs) that will achieve the GHG emission Reduction Targets set by ARB, primarily by reducing VMT from light-duty vehicles through development of more compact, complete, and efficient communities. Kern COG most recently prepared the 2018 Regional Transportation Plan and Sustainable Communities Strategy to fulfill this requirement; and the ARB accepted Kern COG’s GHG quantification demonstration for that plan, which demonstrates achievement of the targets set prior to 2018.

Clean Cars

In January 2012, ARB approved the Advanced Clean Cars Program, which established an emissions control program for cars and light-duty trucks (such as SUVs, pickup trucks, and minivans) of model years 2017-2025. When the program is fully implemented, new vehicles would emit 75% less smog-forming pollutants than the average new car sold today, and greenhouse gas emissions would be reduced by nearly 35%. This Program would help reduce fossil fuel usage for internal combustion engine powered vehicles.

Commercial Motor Vehicle Idling Regulation

In July 2004, ARB initially adopted an Airborne Toxic Control Measure (ATCM) to limit idling of diesel-fueled commercial motor vehicles (idling ATCM) and subsequently amended it in October 2005, October 2009, and December 2013. This ATCM is set forth in Title 13, California Code of Regulations, Section 2485, and requires, among other things, that drivers of diesel-fueled commercial motor vehicles with gross vehicle weight ratings greater than 10,000 pounds, including buses and sleeper berth equipped trucks, not idle the vehicle’s primary diesel engine longer than five minutes at any location. This antiidling regulation helps to reduce fuel consumption by reducing engine usage. The ATCM also requires owners and motor carriers that own or dispatch these vehicles to ensure compliance with the ATCM requirements. The regulation consists of new engine and in-use truck requirements and emission performance requirements for technologies used as alternatives to idling the truck’s main engine. Under the new engine requirements, 2008 and newer model year heavy-duty diesel engines need to be equipped with a non-programmable engine shutdown system that automatically shuts down the engine after five minutes of idling or optionally meet a stringent oxides of nitrogen idling emission standard.

In-Use Off-Road Diesel Fueled Fleets Regulation

In May 2008, ARB approved the In-Use Off-Road Diesel Fueled Fleets Regulation (Off-Road Regulation), which was later amended in December 2009, July 2010, and December 2011. The overall purpose of the Off-Road Regulation is to reduce emissions of oxides of nitrogen (NO_x) and particulate matter (PM) from off-road diesel vehicles operating within California. The regulation applies to all self-propelled off-road diesel vehicles 25 horsepower (hp) or greater used in California and most two-engine vehicles. The Off Road Regulation:

- Imposes limits on idling (i.e., fleets must limit unnecessary idling to 5 minutes), requires a written idling policy, and requires a disclosure when selling vehicles;
- Requires all vehicles to be reported to ARB (using the Diesel Off-Road Online Reporting System, DOORS) and labelled;

- Restricts the adding of older vehicles into fleets starting on January 1, 2014; and
- Requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (VDECS) (i.e., exhaust retrofits).

The anti-idling component of this Off-Road Regulation helps to reduce fuel consumption by reducing engine usage.

Tractor-Trailer Greenhouse Gas Regulation

ARB's Tractor-Trailer Greenhouse Gas regulation reduces the energy consumption of large trucks. ARB developed this regulation to make heavy-duty tractors more fuel efficient. Fuel efficiency is improved by requiring the use of aerodynamic tractors and trailers that are also equipped with low rolling resistance tires. The tractors and trailers subject to this regulation must either use EPA's SmartWay (SmartWay) certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The SmartWay certification process is part of their broader voluntary program called the SmartWay Transport Partnership Program. The regulation applies primarily to owners of 53-foot or longer box-type trailers, and owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. All owners regardless of where their vehicle is registered must comply with the regulation when they operate their affected vehicles on California highways. Besides the owners of these vehicles, drivers, motor carriers, California based brokers and California-based shippers that operate or use them also share in the responsibility for compliance with the regulation.

Zero Emission Vehicles

Zero emission vehicles (ZEVs) include hydrogen fuel cell electric vehicles and plug-in electric vehicles, such as battery electric vehicles and plug-in hybrid electric vehicles.

In 2012, Governor Brown issued EO B-16-2012, which calls for the increased penetration of ZEVs into California's vehicle fleet in order to help California achieve a reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050. In furtherance of that statewide target for the transportation sector, the EO also calls upon CARB, the CEC and the California Public Utilities Commission to establish benchmarks that will: (1) allow over 1.5 million ZEVs to be on California roadways by 2025, and (2) provide the State's residents with easy access to ZEV infrastructure. EO B-16-2012 specifically directed California to "encourage the development and success of zero-emission vehicles to protect the environment, stimulate economic growth, and improve the quality of life in the State."

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen 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 NOX, PM10, and PM2.5 emissions 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. The phasing of this regulation has full implementation by 2023.

CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower (hp) 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 Assembly Bill 1493 (AB 1493, Pavley)

In response to the transportation sector accounting for more than half of California's 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. Refer to Section 4.8, *Greenhouse Gas Emissions*, of this EIR for additional details regarding this regulation.

California's Renewable Portfolio Standard

SB 1078 (2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to obtain at least 20 percent of their energy supply from renewable sources by 2017. SB 107 (2006) changed that target date to 2010. In November 2008, then-Governor Schwarzenegger signed Executive Order S-14-08, which expanded the state's Renewable Portfolio Standard to 33 percent renewable power by 2020. In April 2011, then-Governor Brown signed SB 2X, which legislated the prior Executive Order S-14-08 renewable standard. SB 350 (2015) set an additional RPS goal of 50 percent renewables by 2030. SB 100 (2018) accelerated and extended again the RPS – requiring achievement of a 50 percent RPS by 2026 and a 60 percent RPS by 2030. SB 100 also established a state policy goal to achieve 100 percent carbon-free electricity by 2045.

Assembly Bill 1493 (the Pavley Standard)

Assembly Bill (AB) 1493 (the Pavley Standard) required the CARB to adopt regulations to reduce GHG emissions from non-commercial passenger vehicles and light-duty trucks for model years 2009–2016. CARB obtained a waiver from the USEPA that allows for implementation of these regulations notwithstanding possible federal preemption concerns.

CARB's regulations for passenger vehicles (cars and light trucks) combine the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. This new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California. These standards would apply to all passenger and light-duty trucks used by customers, project employees, and deliveries to the project site.

Executive Order S-1-07 requires a 10% or greater reduction in the average fuel carbon intensity for transportation fuels in California regulated by CARB by 2020. In 2009, CARB approved the Low Carbon Fuel Standard (LCFS) regulations, which became fully effective in April 2010. In 2013, an ethanol company obtained a court order compelling CARB to remedy substantive and procedural defects under the California Environmental Quality Act (CEQA) of the LCFS adoption process (POET, LLC v. CARB). However, the court allowed implementation of the LCFS to continue pending correction of the identified defects. Consequently, this analysis assumes that the LCFS will remain in effect during construction and operation of the project.

In 2012 CARB approved the Advanced Clean Cars (ACC) program, a new emissions-control program for model years 2017–2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, new automobiles will emit 34% fewer global warming gases and 75% fewer smog-forming emissions.

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction mandates established in AB 32. As specifically codified in California Government Code Section 65080, SB 375 requires the Metropolitan Planning Organization (MPO) relevant to the project area (in this case, the Tulare County Association of Governments [TCAG]) to include a Sustainable Communities Strategy (SCS) in its Regional Transportation Plan (RTP) that will achieve GHG emission reduction targets set by CARB by reducing VMT from light-duty vehicles (i.e., passenger vehicles and light-duty trucks) through the development of more compact, complete, and efficient communities. For the area under TCAG's jurisdiction, including the project site, CARB adopted regional targets for reduction of mobile source-related GHG emissions by 5% for 2020 and by 10% for 2035.

Title 24 Building Energy Efficiency Standards

The California Green Building Standards Code, as specified in Title 24, Part 11 of the California Code of Regulations, commonly referred to as CalGreen Building Standards (CalGreen), establishes voluntary and mandatory standards to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The provisions of this code apply to the planning, design, operation, construction, replacement, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout California. Examples of CalGreen provisions include reducing indoor water use, moisture sensing irrigation systems for landscaped areas, construction waste diversion goals, and energy system inspections. CalGreen is periodically amended; the most recent 2019 standards become effective on January 1, 2020.

California Environmental Quality Act

Public Resources Code Section 21100(b)(3) states that an EIR shall identify mitigation measures proposed to minimize significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F provides a list of energy-related topics to be analyzed in the EIR. In late 2018, the California Natural Resources Agency finalized updates

to the CEQA Guidelines. The Appendix G Environmental Checklist Form was amended to include a project's potentially wasteful energy consumption and conflicts with state or local energy efficiency plans

Local

Kern County General Plan

The project site is located within the *Kern County General Plan*, and the policies, goals, and implementation measures in the *Kern County General Plan* applicable to energy 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

Section 1.10.2 (General Provisions, Air Quality)

Implementation Measure G: Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:

- Minimizing idling time.
- Electrical overnight plug-ins.

Section 1.10.2 (General Provisions, Air Quality)

Implementation Measure H: Discretionary projects may use one or more of the following to reduce air quality effects:

- Use of alternative fuel fleet vehicles or hybrid vehicles.
- Provide bicycle lockers and shower facilities on site.
- The use and development of park and ride facilities in outlying areas.
- Other strategies that may be recommended by the local Air Pollution Control Districts.

Section 1.10.6 (General Provisions, Surface Water and Groundwater):

Implementation Measure Y: Promote efficient water use by utilizing measures such as:

- Requiring water-conserving design and equipment in new construction.
- Encouraging water-conserving landscaping and irrigation methods.
- Encouraging the retrofitting of existing development with water conserving devices.

4.6.4 Impacts and Mitigation Measures

This section evaluates the impacts related to energy consumption that may occur during construction and operation of the project. It describes the energy resources associated with the project and identifies the thresholds used to determine 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

This analysis addresses the project's potential energy usage of electricity, natural gas, and transportation fuel (diesel and gasoline) during both construction and operation. The assessment presented herein is based, in part, on the *Energy Technical Report* prepared for the project (Appendix F), review of the project design, and an analysis of applicable Federal, State, and local policies.

Construction

Construction of the proposed project would result in electricity and fuel usage. Project construction is expected to result in water usage which requires electricity to supply water from its source. Electricity intensity for water supply in Kern-San Joaquin County was used from CalEEMod[®] to calculate the electricity needed during each year of construction.

Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, while VMT associated with the transportation of construction materials and construction worker commutes would also result in fuel consumption. Heavy-duty construction equipment and rail deliveries associated with construction activities would use diesel fuel. Construction workers would travel to and from the project site throughout the duration of construction; the technical analysis assumed that construction workers would primarily use gasoline powered passenger vehicles.

Heavy-duty construction equipment of various types would be used during each phase of construction. Methodology consistent with CalEEMod[®] was used to estimate construction equipment usage. Landfill lining materials are anticipated to be delivered via rail for each WMU. Methodology consistent with EPA guidance was used to calculate emissions from rail deliveries. Fuel consumption from construction equipment was estimated by converting the total carbon dioxide (CO₂) emissions from each construction phase to gallons using conversion factors for CO₂ to gallons of diesel.

Fuel consumption from worker, vendor, and hauling trips and rail deliveries are estimated by converting the total CO₂ emissions from each construction phase to gallons using conversion factors for CO₂ to gallons of gasoline or diesel. Worker vehicles are assumed to include light duty automobiles and trucks, vendor vehicles are assumed to include an equal mix of medium-heavy duty trucks and heavy-heavy duty trucks, and hauling vehicles are assumed to include heavy-heavy duty trucks.

Operation

Operation of the project would result in increased electricity and diesel fuel usage and decreased gasoline fuel usage from baseline conditions. Operational diesel fuel usage occurs due to vendor and waste delivery trips to the Facility, offroad equipment usage at the Facility as well as stationary combustion sources such as emergency generators and fire pumps.

Vendor and waste delivery fuel consumption is based on total VMT, which is described in detail in the *Greenhouse Gas Emissions Technical Report* and *Air Quality Technical Report*. Diesel fuel consumption for baseline and project is calculated by dividing total vendor and waste delivery VMT by the average fuel efficiency of diesel vehicles in Kern County from the EMFAC2017 database for calendar years 2018 and

2022, respectively. Diesel fuel used by off-road equipment for baseline and project conditions is calculated based on Facility information for off-road equipment operation in 2018 and 2022 as discussed in the *Greenhouse Gas Emissions Technical Report* and *Air Quality Technical Report*. Diesel fuel used by stationary sources is based on fuel consumption reported in the Facility's 2018 SJVAPCD Annual Emission Inventory (AEI) report. Additional off-road equipment includes the operation of a dozer, compactor, and water truck beyond existing levels of off-road equipment usage. Existing off-road equipment is assumed to have similar levels of activity during project operation when compared to the baseline. Stationary equipment usage is expected to remain the same during project operation as baseline conditions. Therefore, project diesel fuel consumption occurs only due to increased mobile source activity.

Operational gasoline fuel usage occurs due to employee trips when commuting to work at the Facility and is calculated based on employee VMT. Gasoline fuel consumption for baseline and project is calculated by dividing total employee VMT by average fuel efficiency of gasoline vehicles in Kern County from the EMFAC2017 database for calendar years 2018 and 2022, respectively.

Project operation would not include the use of natural gas. However, operational propane use at the Facility occurs due to two propane forklift off-road equipment, which are used in support of operation of the WMUs. Since off-road equipment usage is expected to remain the same during project operation as baseline conditions, no project-related propane fuel consumption is expected to occur.

While project operation results in increased mobile VMT, the fuel efficiency of the vehicles being used by the vendors and waste haul is expected to improve. The amount of fuel consumption from vehicular trips to and from the project site during operation would correspondingly decrease over time as vehicles become more efficient. Numerous regulations have been adopted that encourage, and require, increased fuel efficiency. For example, ARB has adopted an approach to passenger vehicles that combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emissions vehicles in California. As such, operation of the project is expected to use decreasing amounts of fuel over time, due to advances in fuel economy over the lifetime of the project.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment

Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify, per Appendix G of the State CEQA *Guidelines*, a project would have a significant impact to energy and energy resources if it would:

- a. Result in a 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.

While no quantitative thresholds related to energy are included in the CEQA Guidelines, Part I of Appendix F of the CEQA Guidelines states as follows:

“The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

1. decreasing overall per capita energy consumption,
2. decreasing reliance on fossil fuels such as coal, natural gas and oil, and
3. increasing reliance on renewable energy resources.”

Appendix F of the CEQA Guidelines states that an Environmental Impact Report (EIR) should include a discussion of the potential energy impacts of a project, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

For purposes of this analysis, impacts to energy resources will be considered to be significant if the project would result in the wasteful, inefficient or unnecessary consumption of fuel or energy, and conversely if the project would not incorporate renewable energy or energy efficiency measures into building design, equipment use, transportation or other project features.

To determine whether a project would result in the wasteful, inefficient or unnecessary consumption of fuel or energy, and conversely whether the project would fail to incorporate renewable energy or energy efficiency measures into building design, equipment use, transportation or other project features, Appendix F of the CEQA Guidelines identifies six categories of potential energy-related environmental impacts:

- The project’s energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;

- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources; and
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Project Impacts

Impact 4.5-1: The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

Construction

Project construction requires use of on-road trucks for soil hauling and deliveries, and offroad equipment such as excavators, cranes, forklifts, and pavers. As noted above, construction of the proposed project would result in electricity and fuel usage. The energy usage for project construction is shown in **Table 4.6-1, Construction Energy Sources Usage Energy**. Relative to total electricity and fuel comparison countywide, project construction would use approximately 0.0001% of electricity, 0.003% of gasoline and 0.04% of diesel fuel over the duration of construction. In comparison to State-wide usage, construction of the project would equate to approximately 0.00001% of electricity usage, about 0.00008% of gasoline usage and less than 0.003% of diesel fuel usage. Since there are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities, or equipment that would not conform to current emissions standards (and related fuel efficiencies), electricity and fuel usage during construction would be temporary and negligible. In addition, in order to meet air quality standards, construction and operating equipment would meet higher engine efficiency standards (see Section 4.3, *Air Quality*), which also bestow energy efficiency benefits.

The project's base electricity demand associated with construction of the project will be supplied by existing on-site power poles when available. In the event of an emergency or during a power outage, the use of generator sets is permissible, as permitted by the SJVAPCD, which are comprised of a generator and diesel engine used to produce power off-grid. Therefore, relatively negligible impacts to energy demand are expected as a result of construction activities.

Additionally, by maximizing the use of an existing site, with existing facilities and infrastructure, construction activity is limited compared to a less developed Facility, or construction of a new Facility. Therefore, the project would not result in wasteful, inefficient, or unnecessary consumption of energy sources during consumption, and impacts would be less than significant.

Operation

Operation of the project would result in increased electricity and diesel fuel usage and decreased gasoline fuel usage from baseline conditions. Annual operational energy use for the proposed project is shown in **Table 4.6-2, Project Operational Energy Resource Usage Summary**. For comparison, based on 2018 consumption (the most recent complete data set available at the time of the NOP), operation of the project would equate to 0.018% of the total electricity demand countywide and 0.001% of the total electricity demand state-wide. Therefore, the project is not expected to have an impact on the local utility.

In 2018, total in-state electricity consumption was 284,436 GWh (CEC 2018a). The CEC estimates that state-wide energy demand will increase to 354,209 GWh in 2030 (CEC 2018b). The project's anticipated electricity usage of 2,890,941 kWh/year is approximately 0.018% of the projected state-wide demand in 2030. Given that the annual growth rate for the state is 1.27%, the anticipated state-wide energy demand for the project Operational build-out year of 2032 will likely be greater than that in 2030, and thus the project's relative percentage contribution to the state-wide energy demand would be even less.

The project's electricity uses projections also represent a small percentage of regional estimates for SCE. The CEC estimates that PG&E energy demand will increase to 120,000 GWh in 2030 (CEC 2018c). The project's anticipated electricity usage of 2,890,941 kWh/year is approximately 0.002% of the projected PG&E planning area demand in 2030. Overall, the project's projected electricity demand is consistent with, and a small percentage of, state and regional projections.

Furthermore, the project operation will not have a substantial impact on the peak and base period demands for electricity or other forms of energy. In 2018, California's peak grid demand was 46,424 MW. On the same day, PG&E reached a maximum demand of 19,245 MW (California ISO 2019). In comparison, the project's maximum demand is expected to be approximately 0.7 MW in 2023. This is a conservative estimate since it was derived by dividing the total electricity energy required for project operation by the annual number of working hours at the Facility, though some sources of electricity would operate 24 hours per day for every day of the year. Thus, the project will have a relatively negligible effect on state-wide and PG&E peak demands. Therefore, the project will not require additional generation capacity beyond more general state-wide expansion.

In terms of the fuel usage, project gasoline consumption due to mobile VMT decreases relative to baseline. project operational diesel consumption increases by approximately 1,582,951 gallons/year, which is 0.50% of the total diesel that would be used countywide in 2032. Operation of the project would result in about 0.03% of the total diesel that would be used state-wide each year (Table 4.6-2). It should be noted that the majority of the County's oil production is located in the west half of the County (near Bakersfield and to the western county line). Therefore, there is locational efficiency in the current Facility location. Expansion of the Facility would therefore not be wasteful or inefficient in terms of transportation energy consumption.

For the reasons described above, the project would not result in wasteful, inefficient, or unnecessary consumption of energy sources during operations, and impacts would be less than significant.

TABLE 4.6-1: CONSTRUCTION ENERGY SOURCES USAGE ENERGY

Energy Resource	Total Construction ^{1,2}	Maximum Annual Construction ^{1,3}	Kern County		California	
			Annual Consumption	Project's Construction Contribution ⁷ (%)	Annual Consumption	Project's Construction Contribution ⁷ (%)
Electricity (kWh) ⁴	45,727	15,242	15,942,395,088	0.0001%	284,436,261,624	0.00001%
Gasoline (gallons) ⁵	20,113	9,237	359,485,005	0.0026%	11,736,486,673	0.00008%
Diesel (gallons) ⁶	325,466	127,145	318,760,222	0.0399%	5,088,847,996	0.00250%

Notes:

- ¹ Offroad and onroad emissions are calculated using methodology consistent with CalEEMod[®] version 2016.3.2. Offroad emission factors are from OFFROAD whereas onroad emission factors are from EMFAC2017. Electricity consumption for each year of Project Construction is taken from Table 4-1. See Tables 4-2 and 4-3 for detailed fuel consumption of the Off-Road Equipment and On-Road Vehicles categories, respectively.
- ² Total electricity consumption was calculated by multiplying the annual electricity consumption by 3 years of construction. Total gasoline and diesel consumption was calculated by summing usage across 3 year years of construction.
- ³ Maximum annual energy consumption during construction was calculated as the max of the 3 years of construction.
- ⁴ Electricity data for Kern County and the State of California in 2018 are obtained from the California Energy Commission, electricity consumption by county. Available at: <https://ecdms.energy.ca.gov/elecbycounty.aspx>. Accessed: March 2020.
- ⁵ Gasoline data for Kern County and the State of California are obtained from EMFAC2017 for calendar year 2032.
- ⁶ Diesel data for Kern County and the State of California are obtained from EMFAC2017 and OFFROAD2017 for calendar year 2032.
- ⁷ The project's construction contribution was calculated based on the maximum annual construction energy consumption.

Abbreviations:

% - percent

CalEEMod[®] - CALifornia Emissions Estimator MODEL

EMFAC - California Air Resources Board Emissions Factor Model kWh - kilowatt hours

TABLE 4.6-2: PROJECT OPERATIONAL ENERGY RESOURCE USAGE SUMMARY

Energy Resource	Operation ¹	Kern County		California	
		Annual Consumption	Project's Operational Contribution (%)	Annual Consumption	Project's Operational Contribution (%)
Electricity (kWh/yr) ²	2,890,941	15,942,395,088	0.018%	284,436,261,624	0.0010%
Gasoline (gallons/yr) ³	-2,626	359,485,005	-0.001%	11,736,486,673	0.000%
Diesel (gallons/yr) ⁴	1,582,951	318,760,222	0.497%	5,088,847,996	0.031%
Propane (gallons/yr) ⁵	0.0	—	—	588,781,000	0.000%

Notes:

- ¹ Project operation data are based on project energy usages as calculated in Tables 4-6, 4-7, and 4-8.
- ² Electricity data for Kern County and the State of California in 2018 are obtained from the California Energy Commission, electricity consumption bycounty. Available at: <https://ecdms.energy.ca.gov/elecbycounty.aspx>. Accessed: December 2020.
- ³ Gasoline data for Kern County and the State of California are obtained from EMFAC2017 for calendar year 2032.
- ⁴ Diesel data for Kern County and the State of California are obtained from EMFAC2017 and OFFROAD2017 for calendar year 2032.
- ⁵ Propane data for Kern County is not available. Propane data for the State of California is obtained from EMFAC2017 and the Energy Systems Division of Argonne National Laboratory for calendar year 2018. Available at: <https://publications.anl.gov/anlpubs/2020/10/163480.pdf>. Accessed: December 2020.

Abbreviations:

CalEEMod® - CALifornia Emissions Estimator MODEL
 EMFAC - California Air Resources Board Emissions Factor Model
 kWh - kilowatt hours
 kBtu - kilo-British thermal unity - year

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.5-2: The project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Construction and Operation

Energy used during construction and operation would primarily be in the form of electricity for the operation of construction vehicles/equipment and diesel/gasoline for vehicular activities. As concluded in Impact 4.5-1, the project would not result in impacts associated with wasteful, inefficient, or unnecessary use of energy. In addition, construction equipment and trucks would be required to comply with CARB regulations regarding heavy-duty truck idling limits of 5 minutes at a location and the phase-in of off-road emission standards that result in an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines. Although these regulations are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in the efficient use of construction-related energy.

Emissions from truck operations would be further reduced by complying with USEPA and NHTSA-adopted fuel efficiency standards for medium- and heavy-duty trucks. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23% over 2010 baseline levels, depending on the vehicle type. The USEPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5% to 25% reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type. The energy modeling for trucks does not take into account specific fuel reductions from these regulations, since they would apply to fleets as they incorporate newer trucks meeting the regulatory standards; however, these regulations would have an overall beneficial effect on reducing fuel consumption from trucks over time as older trucks are replaced with newer models that meet the standards.

Compliance with applicable idling and fuel reduction standards would improve the energy efficiency of construction equipment and vehicles. The project would also comply with any applicable state plans for renewable energy or energy efficiency to the extent required by law. Further, the project would be consistent with the renewable energy and energy efficiency provisions of the Kern County General Plan. The project has been evaluated for consistency with the relevant provisions and has been concluded to be consistent. As a result, construction and operation of the project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency and impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

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 project site, as well as other similar (i.e., landfill) projects in Kern County. As provided in **Table 3-8, *Cumulative Projects List***, in Chapter 3, *Project Description*, there are 6 projects proposed or approved within 6 miles of the project. These developments could contribute to the cumulative demand for energy in Kern County.

Construction and operation of the proposed project would result in the consumption of fuel and energy, but it would not do so in a wasteful manner, as discussed above. The anticipated project impacts, in conjunction with the projects considered in the cumulative setting, would increase energy consumption primarily in the form of fuel consumption associated with vehicles miles travelled involved in construction and operation activities. The proposed project would not be considered inefficient, wasteful, or unnecessary with regard to energy consumption. Thus, the proposed project would not contribute considerably to cumulative energy consumption, and cumulative impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Cumulative impacts would be less than significant.

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4.7.1 Introduction

This section of the Environmental Impact Report (EIR) describes the geologic and seismic setting of the project area, identifies and describes underlying soils and their characteristics, identifies potential impacts associated with implementation of the proposed project, and recommends mitigation measures to reduce the significance of impacts, where applicable. The issues addressed in this section include risks associated with faults; strong seismic ground shaking; seismic-related ground failure, such as liquefaction, landslides, erosion, subsidence, and earthquake-induced dam failure; and flooding. This section also addresses paleontological resources. This section is primarily based on the data from the *Kern County General Plan*, California Geologic Survey (CGS), U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), and various other publicly available data sources.

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 (e.g., soils and geologic formations, faults, and seismic history) and geologic and seismic hazards (e.g., slope stability, soil hazards, faults and seismicity, strong ground shaking, fault rupture, liquefaction). The regulatory setting applicable to geology and soils is also presented in Section 4.7.2, *Environmental Setting*, and discusses project impacts and associated 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 cyclical periods of expansion and contraction of soil over time causes cracks and displacement in 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 surface expression that defines the fault location at the earth's surface. Faults are classified as Holocene-active, Pre-Holocene, and age-undetermined based on criteria developed by the CGS, formerly known as the California Division of Mines and Geology. By definition, an active fault is one that has experienced surface displacement within the Holocene period (within the last 11,700 years), a pre-Holocene fault is one that has experienced displacement within the Quaternary period (before 11,700 years but during the last 1.6 million years), and age-undetermined faults are those that have not experienced movement in the last 1.6 million years or where the recency of fault movement has not been determined.

Ground Shaking: The central and southern California regions are characterized by, and have a history of, faults and associated seismic activity that have resulted in substantive ground shaking events. Earthquakes are classified by their magnitude, a measure of the amount of energy released during an event that is transmitted into waves that radiate out from the source of the earthquake. Ground shaking is a term used to

describe the vibration of the ground during an earthquake. As a generalization, the severity of ground shaking increases as magnitude increases and decreases as distance from the causative fault increases.

Landslides and Rockfalls: These events are large movements of land downhill. They can be induced by seismic events (earthquakes), also referred to as dynamic forces, or static forces that can both 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 human construction activities.

Liquefaction: This occurs when saturated, loose unconsolidated materials (e.g., sand, silty sand) are transformed from behaving like a solid to a near-liquid state due to increased pore water pressure that overcomes the frictional grain to grain forces. The increase in pore pressure is caused by the strong ground motion from an earthquake.

Paleontological Resources: The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources contribute to the understanding of past environments, environmental change, and the evolution of life.

Quaternary Age: The most recent of the three periods of the Cenozoic Era in the geologic time scale of the International Commission on Stratigraphy (ICS). It follows the Tertiary Period, spanning 2.588 ± 0.005 million years ago to the present. The Quaternary includes two geologic epochs: the Pleistocene and the Holocene Epochs.

Seismic Hazards: Seismicity is the geographic and historical distribution of earthquakes, including their frequency, intensity, and distribution. Seismic hazards include surface rupture, ground shaking, liquefaction, lateral spreading, landslides, dynamic settlement, differential settlement, and sand boils.

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 causing displacement of surface materials. Fault ruptures almost always follow pre-existing faults that are in 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 displacement of the earth’s crust that can over time result in damage to improvements.

Unique Paleontological Resource: This term is defined as a fossil that meets one or more of the following criteria: (1) it provides information on the evolutionary relationships and developmental trends among organisms, living or extinct; or (2) it provides data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geology.

4.7.2 Environmental Setting

Regional Geologic Setting

The project site is located near the southeastern corner of the Great Valley Geomorphic Province, one of 11 provinces recognized in California. The Great Valley Geomorphic Province, which lies within the central portion of California, is approximately 400 miles long and 50 miles wide. It extends from Redding in the north to Bakersfield in the south and is characterized by thick alluvial deposits in a wide and long structural trough bounded by the Sierra Nevada and Coast Range mountain ranges. The southern part of the province is defined by the San Joaquin Valley which is drained by the San Joaquin River (CGS 2002). The Tehachapi Mountains mark the southern boundary of the province, which is not far from the intersection of the San Andreas and Garlock faults. The Garlock Fault is a major strike-slip fault that is oriented in a roughly east-west direction. The San Andreas Fault is the master fault of an intricate fault network cutting through the California coastal region; the fault extends from northern California to the San Bernardino area of southern California. Sediments from all directions have been deposited into the Great Valley Geomorphic Province almost continuously for approximately 160 million years. The province contains predominantly sedimentary rocks and recent alluvial deposits, with limited amounts of volcanic rock located in the Sutter Buttes area near Sacramento. In general, coarser sediments are found in recent, terrestrial sedimentary deposits near the margins of the Great Valley Geomorphic Province.

Local Geologic Setting

Geology

As described in Chapter 3, *Project Description*, the project site is situated in the southern San Joaquin Valley in Kern County, California. The project site is an existing solid waste Facility located in central Kern County at 2500 West Lokern Road, Buttonwillow, CA, approximately 8 miles west of Buttonwillow, on the northern side of Lokern Road.

The project site is relatively flat with a gentle downward slope to the northeast with elevations ranging from approximately 335 feet above mean sea level (msl) near the northeast corner to 415 feet above msl near the southwest site boundary. The project site is located within the Valley Region of the County, which is characterized by relatively low rainfall, relatively high average summer temperatures, and generally mild winters.

In the vicinity of the project site there are three distinct stratigraphic zones that comprise the top 600 feet of the sedimentary sequence and include: (i) the Upper Zone, which includes the Silt Unit and the Upper Sand Unit, (ii) the Intermediate Zone, which includes the Upper Clay Layer, the Intermediate Unit, and the Lower Clay Layer, and (iii) the Lower Zone, which includes the Lower Unit and is underlain by the Corcoran Clay (Geosyntech 2018).

Soils

Surface sediments of Quaternary alluvial deposits are common within the portion of the San Joaquin Valley associated with the project site, and typically consist of clay, silt, sand and gravel derived predominately from the upland areas to the west. These entisols (recently formed or created soils), which lack soil horizon

development, are generally found in active environments such as the distal end of a floodplain or mountain slope. The bulk of the soil is made up of unchanged parent material such as sand or rock fragments. These soils are generally considered susceptible to erosion unless well terraced for agriculture.

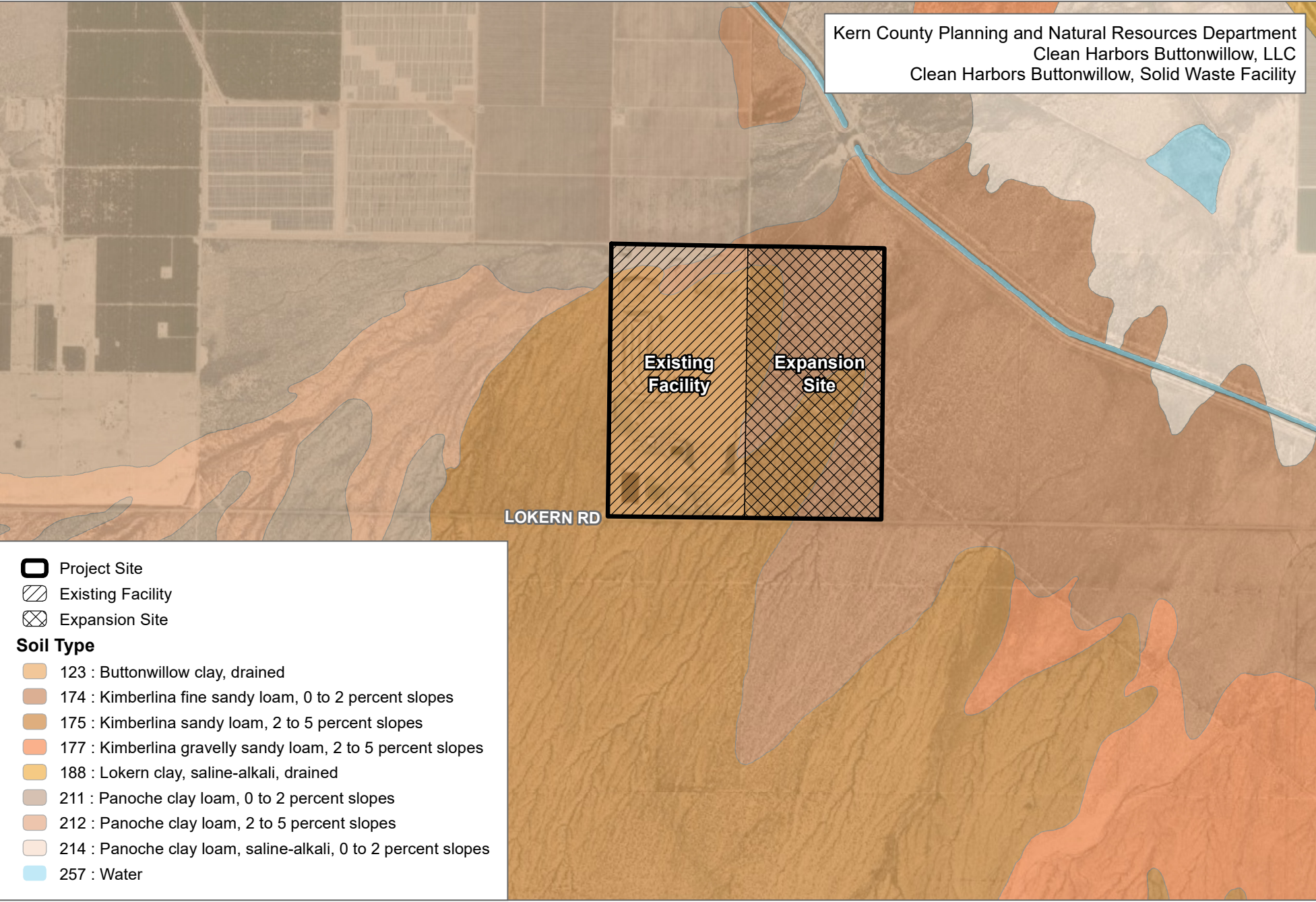
As identified on **Figure 4.7-1, Soils Map**, three soil types underlay the project sites. The soil types within project site include 174 - Kimberlina Fine Sandy Loam, 0 to 2 percent slopes; 175 - Kimberlina sandy loam, 2 to 5 percent slopes; 211 - Panoche clay loam, 0 to 2 percent slopes (NRCS 2022).

Slopes are flat with a gentle downward slope to the northeast. Drainage classes and hydrological properties are not assigned for this soil type.

Faults and Seismicity

The project site is located in a region that includes Holocene-active (displacement within the last 11,700 years) and pre-Holocene faults, consistent with the majority of the central California area. Holocene-active faults present a variety of potential risks, including strong ground shaking, dynamic densification, liquefaction, mass wasting, and surface rupture at the fault trace. See **Figure 4.7-2, Regional Faults**. Generally speaking, the following four factors are the principal determinants of seismic risk at a given location:

- Distance to the source fault;
- The magnitude of the earthquake event;
- Duration of ground shaking; and
- Nature of earth materials underlying the site (e.g., density, composition, and geotechnical engineering properties).



- Project Site
- Existing Facility
- Expansion Site

Soil Type

- 123 : Buttonwillow clay, drained
- 174 : Kimberlina fine sandy loam, 0 to 2 percent slopes
- 175 : Kimberlina sandy loam, 2 to 5 percent slopes
- 177 : Kimberlina gravelly sandy loam, 2 to 5 percent slopes
- 188 : Lokern clay, saline-alkali, drained
- 211 : Panoche clay loam, 0 to 2 percent slopes
- 212 : Panoche clay loam, 2 to 5 percent slopes
- 214 : Panoche clay loam, saline-alkali, 0 to 2 percent slopes
- 257 : Water

SOURCE: NAIP 2016, USDA NRCS

2022

DUDEK



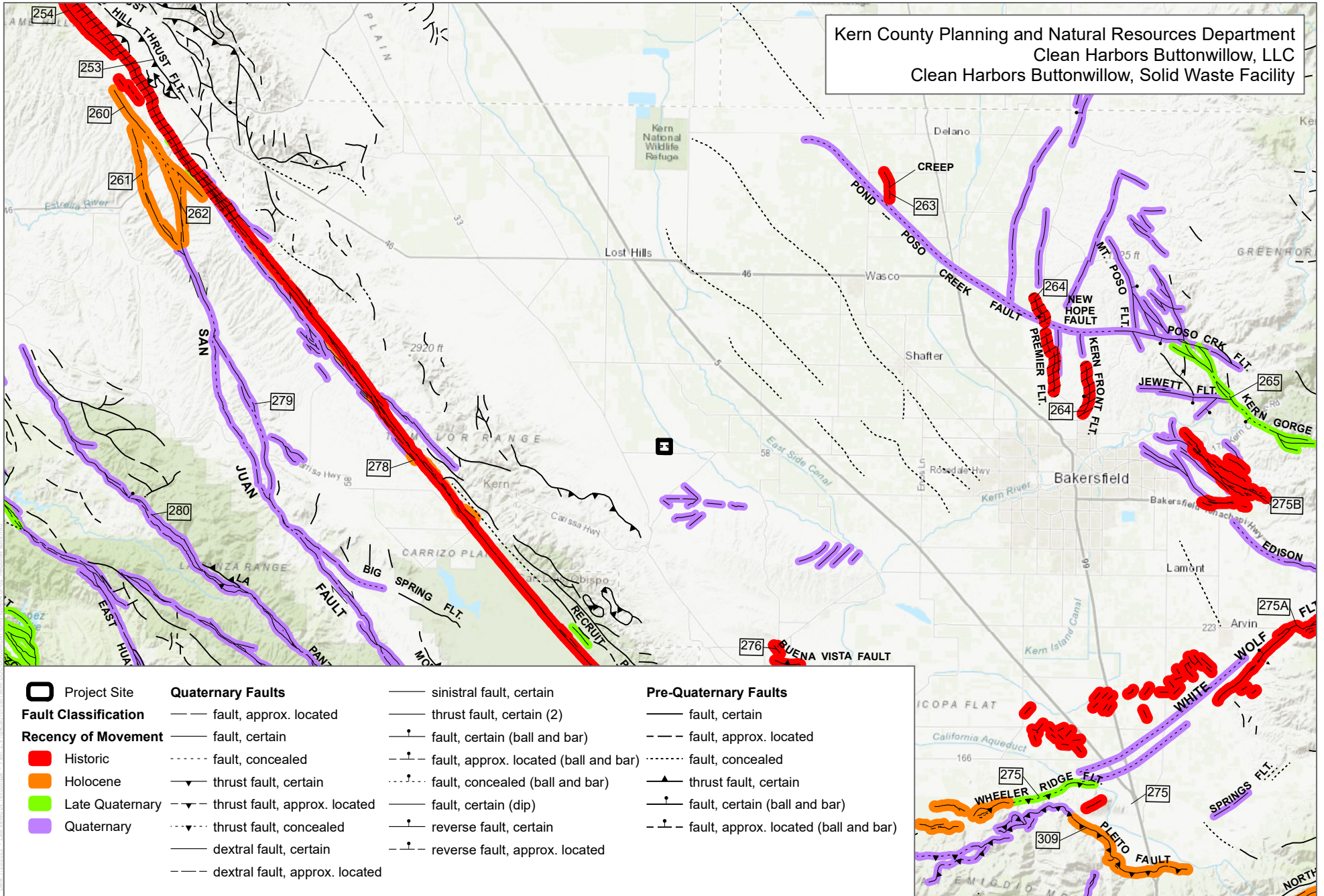
0 1,000 2,000 Feet

FIGURE 4.7-1

Soils Map

Clean Harbors

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SOURCE: CGS 2022

2022

FIGURE 4.7-2
 Regional Faults
 Clean Harbors

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No known Holocene-active faults cross the project sites, however the project area is located in the vicinity of four regionally significant active faults: San Andreas Fault (located approximately 14 miles southwest), Buena Vista Fault (located approximately 17 miles southeast) Premier Fault (located approximately 31 miles northeast), and Kern Front Fault (located approximately 33 miles northeast) (Caltech 2022). These faults are further described below:

San Andreas Fault

San Andreas Fault is a right-lateral, strike-slip fault that extends approximately 746 miles from the Mendocino Escarpment in northern California to Cajon Pass near San Bernardino in southern California. The segment of San Andreas Fault in Kern County is a small portion of the total extent; however, it is important because it is an active fault capable of damaging the project area. This portion of the fault breaks from the fault zone's predominantly 350-degree trending direction between the San Luis Obispo and Los Angeles County lines. Several earthquakes have occurred within the San Andreas Fault Zone in historic times that have produced significant seismic shaking in the vicinity of the project area. The most recent notable earthquake event on this segment of San Andreas Fault was the Fort Tejon Earthquake, which occurred on January 9, 1857, resulting in a rupture extending more than 200 miles (Caltech 2022). An earthquake along this fault is estimated to have a magnitude of 8.3, which is designated as the maximum credible earthquake. Areas along this fault have been designated as Alquist-Priolo Special Studies Zones. The closest segment of this fault is located approximately 14 miles southwest of the project site.

Buena Vista Fault

The Buena Vista Fault is a thrust fault that spans only about 3 miles. A thrust fault is a fault in which the upper block, above the fault plane, moves up and over the lower block. This type of faulting is common in areas of compression, such as regions where one plate is being subducted under another. When the dip angle is shallow, the fault is often described as a thrust fault and greater angles are then described as a reverse fault. The Buena Vista Fault has been experiencing slow displacement, known as fault creep, since 1933 or earlier and likely due to oil extraction activities (SCEDC 2022a). The closest segment of this fault zone is located approximately 17 miles southeast of the project sites.

Premier Fault

The Premier Fault is linked with the New Hope Fault segment and only about 10 miles long in total (SCEDC 2022b). This normal fault (a normal fault is one in which the block above the fault is moving downward relative to the block below), dips to the west. And has been experiencing active fault creep since the late 1940s. Like the Buena Vista Fault, the fault creep is associated with oil extraction. The fault trace is located approximately 31 miles to the northeast of the project site. .

Kern Front Fault

The Kern Front Fault is just a couple miles further east from the Premier Fault, also a normal fault, and is approximately 5.5 miles in length (SCEDC 2022c). The fault dips to the west and is actively creeping due to oil extraction activities. The Kern Front Fault is located approximately 33 miles northeast of the project site.

Seismic Hazards

Fault Rupture

Fault (surface) ruptures are generally considered to be more likely along Holocene-active faults (faults with observed displacement in the last 11,700 years). In accordance with requirements of the Alquist-Priolo Earthquake Hazards Act, the State Geologist has identified Alquist-Priolo Earthquake Fault Zones around Holocene-active faults that have been determined to be especially prone to surface fault rupture.

The project site is not located within an Alquist-Priolo Earthquake Fault Zone (CGS 2019). As described above, the closest active fault to the project sites—San Andreas Fault—is located approximately 14 miles southwest of the project sites and does not cross or trend toward the project sites. Based on the distance between the project sites and San Andreas fault, risk of fault rupture within the project site is expected to be very low.

Ground Shaking

During a seismic event, the project site may be subjected to high levels of ground shaking due to proximity to Holocene-active faults in the region. All Holocene-active faults in the project vicinity are capable of generating significant ground shaking during a seismic event. **Table 4.7-1, *Historic Earthquakes in Project Area Vicinity***, shows some of the significant historical earthquakes that have occurred in the region and their magnitudes.

TABLE 4.7.2-1: HISTORIC EARTHQUAKES IN PROJECT AREA VICINITY

Earthquake (Month Year)	Approximate Distance to Project Site (miles)	Earthquake Magnitude
Wheeler Ridge (May 1993)	30	5.2
Kern County (Aug 1952)	38	7.5
Kern County (July 1952)	42	5.8
Parkfield (June 1966)	49	6.0

Source: SCEDC 2022d

Liquefaction

Liquefaction occurs when partially saturated unconsolidated soils are subjected to ground shaking and the pore pressure causes the soils to enter more of a liquid state than solid, resulting in the soil's inability to support overlying structures. Liquefaction typically occurs in areas where the groundwater is less than 50 feet from the surface and where the soils are composed of poorly consolidated fine to medium sand. Lateral spreading consists of lateral movement of gently to steeply sloping saturated soil deposits that is caused by earthquake-induced liquefaction. According to Figure 14 in the *Kern County General Plan Safety Element* and the Land Use Map in the *Kern County General Plan Land Use Open Space and Conservation Element*, the project site is not within a designated zone of shallow groundwater. In addition, according to data reviewed as part of evaluating the 27 CCR requirements for separation of landfill waste and groundwater levels, groundwater is found at the project site at levels greater than 50 feet below ground surface (Geosyntech 2018). The lowest point in WMU 36, is approximately 307 feet above mean sea level (amsl) on the northern portion of the cell. The highest groundwater elevation in this area is approximately 223 feet, resulting in a separation

of approximately 84 vertical feet. The lowest point in WMU 37 lies approximately 292 feet amsl on the western end of the cell. The highest groundwater elevation in this area is approximately 223 feet amsl, resulting in a separation of approximately 69 vertical feet. The lowest point in WMU 38 lies approximately 295 feet amsl on the southern end of the cell. The highest groundwater elevation in this area is approximately 223 feet amsl, resulting in a separation of approximately 72 vertical feet.

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, which are not present within the project sites. The project sites are located on flat to gently sloping topography and is not designated as a landslide hazard zone according to *Figure 12: Overlay Constraints: Seismic, Landslides, and Steep Slope Hazards* in the *Safety Element of the Kern County General Plan*.

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. The project site is in the portion of the County where subsidence is known to occur. 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 *Safety Element* of 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, subsidence has the potential to occur. The California Geologic Energy Management Division (CalGEM), formerly the Department of Conservation (CDOC) Division of Oil, Gas, and Geothermal Resources (DOGGR), 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 remediation activities ensure that no significant impacts from subsidence would occur.

Expansive Soils

Expansive soils are characterized by their potential “shrink-swell” behavior. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in certain fine-grained clay sediments from the process of wetting and drying. Clay minerals such as smectite, bentonite, montmorillonite, beidellite, vermiculite, and others are known to expand with changes in moisture content. The higher the percentage of expansive minerals present in near surface soils, the higher the potential for significant expansion. The greatest effects occur when there are significant or repeated moisture content changes. Expansions of 10% or more in volume are not uncommon. This change in volume can exert enough force on a building or other structure to cause cracked foundations, floors, and basement walls. Damage to the upper floors of the building can also occur when movement in the foundation is significant. Structural damage typically occurs over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils.

Plasticity index (PI) is one of the standard Atterberg limits used to indicate the plasticity characteristics of a soil. It is defined as the numerical difference between the liquid limit and plastic limit of the soil. It is the range of water content in which a soil exhibits the characteristics of a plastic solid. Soils that have a high PI have a wide range of moisture content in which the soil performs as a plastic material. Soils with a PI greater than 20 usually have a medium to high swell potential; soils with a PI greater than 35 usually have a very high swell potential. Swelling greatly reduces soil strength.

Within the project site, there are three types of soils. The soil types within project site include 174 - Kimberlina Fine Sandy Loam, 0 to 2 percent slopes; 175 - Kimberlina sandy loam, 2 to 5 percent slopes; 211 - Panoche clay loam, 0 to 2 percent slopes (NRCS 2022). The NRCS has identified the Kimberlina series soils as non-plastic indicating a low potential for expansion. The Panoche series of soils are identified as slightly plastic and therefore could potentially have a potential for exhibiting some level of expansive properties.

Paleontological Setting

During the late Pleistocene age, fossil evidence suggests that the San Joaquin Valley was inhabited by numerous large mammalian species including sloths, horses, bears, mammoth, bison, camels, as well as prong-horned antelope. Large carnivorous species included saber-toothed cats, wolves, mountain lions, desert coyotes and foxes, while smaller animals included rodents, rabbits, squirrels and a multitude of birds. Studies of pollen and pack rat middens suggest that desert vegetation began replacing the low-elevation woodlands between 12,000 and 8,000 years ago. Evidence suggests that the plant and animal communities that exist within the San Joaquin Valley today did not become established until after 4,300 years ago.

4.7.3 Regulatory Setting

Federal

Clean Water Act (Erosion Control)

The Federal Clean Water Act (CWA) (33 United States Code [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 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 nonpoint-source discharges to surface water. Such discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). Projects that disturb one-acre or more are required to obtain NPDES coverage under the NPDES General Permit for Stormwater Discharges Associated with Construction Activity (General Permit), Order No. 2009-0009-DWQ. The General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which includes best management practices (BMPs) to regulate stormwater runoff, including measures to prevent soil erosion. Requirements of the CWA and associated SWPPP are described in further detail in Section 4.8, *Hydrology and Water Quality*.

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act of 1977 is a statute formulating a national policy 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). Under the NEHRP, four Federal agencies have responsibility for long-term earthquake risk reduction: the USGS, the National Science Foundation (NSF), FEMA, and the National Institute of Standards and Technology (NIST). These agencies assess U.S. earthquake hazards, deliver notifications of seismic events, develop measures to reduce earthquake hazards, and conduct research to help reduce overall U.S. vulnerability to earthquakes.

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. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards such as those to which the project would be required to adhere.

Paleontological Resources

A variety of Federal statutes specifically address paleontological resources. They are generally applicable to a project if that project includes Federally owned or Federally managed lands or involves a Federal agency license, permit, approval, or funding. The first of these is the Antiquities Act of 1906 (54 USC 320301–320303 and 18 USC 1866(b)), which calls for protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on Federally administered lands, the latter of which would include fossils. The Antiquities Act both establishes a permit system for the disturbance of any object of antiquity on Federal land and sets criminal sanctions for violation of these requirements. The Antiquities Act was extended to specifically apply to paleontological resources by the Federal Aid Highways Act of 1958. More recent Federal statutes that address the preservation of paleontological resources include the National Environmental Policy Act (NEPA), which requires the consideration of important natural aspects of national heritage when assessing the environmental impacts of a project (P.L. 91–190, 31 Stat. 852, 42 USC 4321–4327). The Federal Land Policy Management Act of 1976 (P.L. 94–579; 90 Stat. 2743, USC 1701–1782) requires that public lands be managed in a manner that will protect the quality of their scientific values, while Title 40 Code of Federal Regulations (CFR) Section 1508.2 identifies paleontological resources as a subset of scientific resources. The Paleontological Resources Preservation Act (Title VI, Subtitle D, of the Omnibus Land Management Act of 2009) is the primary piece of Federal legislation.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act offers provisions of paleontological resources identified on Federal, Native American, or State lands and guidance for their management and protection and promotes public awareness and scientific education regarding vertebrate fossils. The act also requires Federal agencies to develop plans for inventory, collection, and monitoring of paleontological resources and establishes stronger criminal and civil penalties for the removal of scientifically significant fossils on Federal lands.

State

Alquist-Priolo Earthquake Fault Zoning Act of 1972

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (formerly the Special Studies Zoning Act) regulates the 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.

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 act 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 Seismic Hazards Mapping Act, site-specific geotechnical investigations must be performed prior to permitting most urban development projects within seismic hazard zones.

California Building Code

The California Building Code (CBC), which is codified in California Code of Regulations (CCR) Title 24, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress facilities, and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The 2019 edition of the CBC is based on the 2018 International Building Code (IBC) published by the International Code Council. The code is updated triennially, and the 2019 edition of the CBC was published by the California Building Standards Commission in 2019, and took effect starting January 1, 2020. The 2019 CBC contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-16, *Minimum Design Loads for Buildings and Other Structures*,

provides requirements for general structural design and includes means for determining earthquake loads (which is defined as the overall force to which a structure is subjected in supporting a weight or mass, or in resisting externally applied forces. Excess load or overloading may cause structural failure) as well as other loads (such as wind loads) for inclusion into building codes. Seismic design provisions of the building code generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of the structure, which the structure then must be designed to withstand. The prescribed lateral forces are generally smaller than the actual peak forces that would be associated with a major earthquake. Consequently, structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake. However, it is reasonable to expect that a structure designed in accordance with the seismic requirements of the CBC should not collapse in a major earthquake.

The earthquake design requirements consider the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine a seismic design category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site; SDC ranges from A (very small seismic vulnerability) to E/F (very high seismic vulnerability and near a major fault). Seismic design specifications are determined according to the SDC in accordance with Chapter 16 of the CBC. Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803); excavation, grading, and fills (Section 1804); load bearing of soils (1806); and foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). For SDC D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

Chapter 18 also describes analysis of expansive soils and the determination of the depth to groundwater table. Expansive soils are defined in the CBC as follows:

1803.5.3 Expansive Soil. In areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist. Soils meeting all four of the following provisions shall be considered expansive, except that tests to show compliance with Items 1, 2 and 3 shall not be required if the test prescribed in Item 4 is conducted:

1. Plasticity index (PI) of 15 or greater, determined in accordance with ASTM D 4318.
2. More than 10 percent of the soil particles pass a No. 200 sieve (75 micrometers), determined in accordance with ASTM D 422.
3. More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM D 422.
4. Expansion index greater than 20, determined in accordance with ASTM D 4829.

California Code of Regulations Title 27, Section 20370 – Seismic Design

CCR Title 27, Section 20370 requires that Class II landfill facilities be designed to withstand the maximum credible earthquake (MCE) without damage to the foundation or to the structures which control leachate, surface drainage, or erosion, or gas. Class III Units shall be designed to withstand the maximum probable earthquake (MPE) without damage to the foundation or to the structures which control leachate, surface drainage, or erosion, or gas.

Public Resources Code Sections 5097.5 and 30244

Other state requirements for paleontological resource management are included in PRC Sections 5097.5 and 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (e.g., State, County, City, District) lands.

California State Regional Water Quality Control Board, Stormwater General Construction Permit

The five-member California State Water Resources Control Board (SWRCB) allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine Regional Water Quality and Control Boards (RWQCBs) in the major watersheds of the state. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters.

In 1999, the state adopted the NPDES General Permit for Storm Water Discharges Associated with Construction Activities (Construction Activities General Permit) (SWRCB Order No. 2012-0006-DWQ, NPDES No. CAS000002). The General Construction Permit requires that construction sites with 1 acre or greater of soil disturbance, or less than 1 acre but part of a greater common plan of development, apply for coverage for discharges under the General Construction Permit by submitting a Notice of Intent for coverage, developing an SWPPP, and implementing BMPs to address construction site pollutants.

The SWPPP should contain a site map(s) that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list the BMPs the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in an SWPPP. Enrollment under the General Construction Permit is through the Stormwater Multiple Application and Report Tracking System. Additionally, the SWRCB is responsible for implementing the CWA and issues NPDES permits to cities and counties through the individual regional boards.

Local

Construction and operation of the proposed project would be subject to policies and regulations contained within the *Kern County General Plan*, *Kern County Zoning Ordinance*, and *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

Construction and operation of the project would be subject to policies and regulations contained within the *Kern County General Plan*, *Kern County Zoning Ordinance*, and the *Kern County Code of Building Regulations*, which include policies 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. The policies, goals, and implementation measures in the *Kern County General Plan* for geology and soils that are applicable to the project are provided below. The *Kern County General Plan* contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but as stated in Chapter 2, *Introduction*, all policies, goals, and implementation measures in the *Kern County General Plan* are incorporated by reference.

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

Implementation Measures

Implementation Measure D: Review and revise the County's current Grading Ordinance as needed to ensure that its standards minimize permitted topographic alteration and soil erosion while maintaining soil stability.

Implementation Measure N: Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.

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 M: In areas of known paleontological resources, the County should address the preservation of these resources where feasible.

Chapter 4. Safety Element

Goals

Goal 1: Minimize injuries and loss of life and reduce property damage.

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 identifying 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.

4.5 Landslides, Subsidence, Seiche, and Liquefaction

Policies

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 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.

Kern County Code of Building Regulations (Title 17 of the Ordinance Code of Kern County)

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, 2016 Edition (CCR Title 24), 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 for earthquake ground motion. California has an unreinforced masonry program that details seismic safety requirements for Zone 4. Seismic provisions associated with Seismic Zone 4 have been adopted.

Kern County Grading Code Chapter 17.28

The purpose of the Kern County Grading Code is to safeguard life, limb, property, and the public welfare by regulating grading on private property. All requirements of the Kern County Grading Code would be applied during implementation of the project. All required grading permit(s) would be obtained prior to commencement of construction activities. Sections of the Grading Code that are particularly relevant to geology and soils are provided below.

Section 17.28.140 – Erosion Control

- A. **Slopes.** The faces of cut-and-fill slopes shall be prepared and maintained to control erosion. This control may consist of effective planting. Protection for the slopes shall be installed as soon as practicable and prior to calling for final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.
- B. **Other Devices.** Where necessary, check dams, cribbing, riprap, or other devices or methods shall be employed to control erosion and provide safety.
- C. **Temporary Devices.** Temporary drainage and erosion control shall be provided as needed at the end of each work day during grading operations, such that existing drainage channels would not be blocked. Dust control shall be applied to all graded areas and materials and shall consist of applying water or another approved dust palliative for the alleviation or prevention of dust nuisance. Deposition of rocks, earth materials or debris onto adjacent property, public roads or drainage channels shall not be allowed.

Section 17.28.170 – Grading Inspection

- A. **General.** All grading operations for which a permit is required shall be subject to inspection by the building official. Professional inspection of grading operations and testing shall be provided by the civil engineer, soils engineer, and the engineering geologist retained to provide such services in accordance with Subsection 17.28.170(E) for engineered grading and as required by the building official for regular grading.

- B. **Civil Engineer.** The civil engineer shall provide professional inspection within such engineer's area of technical specialty, which shall consist of observation and review as to the establishment of line, grade, and surface drainage of the development area. If revised plans are required during the course of the work, they shall be prepared by the civil engineer.
- C. **Soils Engineer.** The soils engineer shall provide professional inspection within such engineer's area of technical specialty, which shall include observation during grading and testing for required compaction. The soils engineer shall provide sufficient observation during the preparation of the natural ground and placement and compaction of the fill to verify that such work is being performed in accordance with the conditions of the approved plan and the appropriate requirements of this chapter. Revised recommendations relating to conditions differing from the approved soils engineering and engineering geology reports shall be submitted to the permittee, the building official and the civil engineer.
- D. **Engineering Geologist.** The engineering geologist shall provide professional inspection within such engineer's area of technical specialty, which shall include professional inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. Revised recommendations relating to conditions differing from the approved engineering geology report shall be submitted to the soils engineer.
- E. **Permittee.** The permittee shall be responsible for the work to be performed in accordance with the approved plans and specifications and in conformance with the provisions of this Code, and the permittee shall engage consultants, if required, to provide professional inspections on a timely basis. The permittee shall act as a coordinator between the consultants, the contractor and the building official. In the event of changed conditions, the permittee shall be responsible for informing the building official of such change and shall provide revised plans for approval.
- F. **Building Official.** The building official may inspect the project at the various stages of the work requiring approval to determine that adequate control is being exercised by the professional consultants.
- G. **Notification of Noncompliance.** If, in the course of fulfilling their responsibility under this chapter, the civil engineer, the soils engineer, or the engineering geologist finds that the work is not being done in conformance with this chapter or the approved grading plans, the discrepancies shall be reported immediately in writing to the permittee and to the building official. Recommendations for corrective measures, if necessary, shall also be submitted.
- H. **Transfer of Responsibility.** If the civil engineer, the soils engineer, or the engineering geologist of record is changed during the course of the work, the work shall be stopped until:
1. The civil engineer, soils engineer, or engineering geologist, has notified the building official in writing that they will no longer be responsible for the work and that a qualified replacement has been found who will assume responsibility.
 2. The replacement civil engineer, soils engineer, or engineering geologist notifies the building official in writing that they have agreed to accept responsibility for the work.

4.7.4 Impacts and Mitigation Measures

This section evaluates the impacts to geology and soils that may occur during construction and operation of the project. It describes the potential geologic and soil resources located on and adjacent to the project sites that may be affected and identifies the thresholds used to determine 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

The analysis in this section considered potential impacts associated with geology and soils issues identified in the *Kern County Environmental Checklist*. Potential significant impacts associated with the project site were identified based on an analysis of applicable *Kern County General Plan* policies and data from the *Kern County General Plan*, CGS, NRCS, and various other publicly available data sources.

The loss of any identifiable fossil that could yield information important to prehistory, or that embodies the distinctive characteristics of a type of organism, environment, period of time, or geographic region, would be a significant environmental impact. Direct impacts to paleontological resources primarily concern the potential destruction of nonrenewable paleontological resources and the loss of information associated with these resources. This includes the unauthorized collection of fossil remains. If potentially fossiliferous bedrock or surficial sediments are disturbed, the disturbance could result in the destruction of paleontological resources and subsequent loss of information (significant impact). At the project-specific level, direct impacts can be mitigated to a less-than-significant level through the implementation of mitigation for paleontological resources.

The CEQA threshold of significance for a significant impact to paleontological resources is reached when a project is determined to “directly or indirectly destroy a significant paleontological resource or unique geologic feature.” In general, for projects that are underlain by paleontologically sensitive geologic units, the greater the amount of ground disturbance, the higher the potential for significant impacts to paleontological resources. For projects that are directly underlain by geologic units with no paleontological sensitivity, there is no potential for impacts on paleontological resources unless sensitive geologic units which underlie the non-sensitive unit are also affected.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

The Kern County Environmental Checklist identifies the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant 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 and Mitigation Measures

Impact 4.7-1(a): The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault.

The project site is located in a historically seismic area with several Holocene-active faults in the region, including the San Andreas Fault (located approximately 14 miles west), Buena Vista Fault (located approximately 17 miles southwest), the Premier Fault (located approximately 31 miles northeast), and the Kern Front Fault (located approximately 33 miles northeast). However, the project site is not located within a State of California Alquist-Priolo Earthquake Fault Zone. Therefore, given that no known active faults cross the project site the potential for fault rupture would be very low, and impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.7-1(b): The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

As described above, the project site is located in a highly seismic region within the influence of several fault systems, including the San Andreas, Premier, Buena Vista, and the Kern Front Faults, which are all capable of generating ground motions that could affect the project area. Seismic ground shaking could compromise the integrity of the landfill Facility, resulting in potentially significant impacts to people or improvements if not designed appropriately.

The project proponent is required to design the landfill Facility in accordance with 27 CCR Section 20370. Section 20370 requires that waste management units be designed to withstand the maximum credible earthquake (MCE) (i.e., the maximum intensity earthquake that is assumed to occur closest to the site) without damage to the foundation or to the structures that control leachate, surface drainage, erosion, or gas. Prior to the issuance of grading permits, the project proponent would be required to retain a licensed geotechnical engineer to design the project to withstand ground shaking at the site that would be associated with the MCE for the site. All ground disturbance would be required to adhere to the specifications, procedures, and site conditions contained in the final design plans, which would be fully compliant with the seismic recommendations by the California licensed professional geotechnical engineer in accordance with the CBC and Kern County Building Code requirements. A copy of the approved design would be submitted to the Kern County Planning and Natural Resources Department. Adherence to the requirements of the 27 CCR Section 20370, the CBC and the Kern County Building Code, Mitigation Measures MM 4.7-1 and MM 4.7-2 would ensure that seismic hazards related to ground shaking would be minimized. The proposed modifications to

the existing landfill facilities would be constructed in accordance with all applicable codes, which require seismic considerations in the design plans that would protect the general public and on-site staff from potential hazards associated with ground shaking from an earthquake. Thus, with adherence to the above-mentioned regulatory requirements, project structures and personnel present during the construction and operational phases of the project would not be exposed to substantial adverse effects, including the risk of loss, injury, or death resulting from strong seismic ground shaking and impacts would be less than significant with mitigation.

Mitigation Measures

MM 4.7-1 Prior to the issuance of building or grading permits for the project, the project proponent shall conduct a final engineering design specific geotechnical study to evaluate soil conditions and geologic hazards on the project site and submit it to the Kern County Public Works Department for review and approval. The recommendations of the study shall be incorporated into MM 4.7-2.

MM 4.7-2 Prior to the issuance of grading permits, the project proponent shall retain a California-registered professional geotechnical engineer to design the project facilities to withstand probable seismically induced ground shaking at the site as well as other geotechnical hazards including collapsible soils, subsidence, or expansive soils, if applicable, as determined by the Kern County Public Works Department.

- a. All grading and construction on-site shall adhere to the specifications, procedures, and site conditions contained in the final design plans, which shall be fully compliant with the seismic recommendations of the California-registered professional engineer. The procedures and site conditions shall encompass site preparation, foundation specifications, and protection measures for buried metal.
- b. The final structural design shall be subject to approval and follow-up inspection by the Kern County Public Works Department. Final design requirements shall be provided to the on-site construction supervisor and Kern County Building Inspector to ensure compliance. A copy of the approved design shall be submitted to the Kern County Planning and Natural Resources Department.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.7-1 and MM 4.7-2 impacts related to ground shaking would be reduced to a less-than-significant level.

Impact 4.7-1(c): The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

As described above, 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. According to Figure 14 in the *Kern County General Plan Safety Element* and the Land Use Map in

the *Kern County General Plan Land Use Open Space and Conservation Element*, the project site is not within a designated zone of shallow groundwater.

In addition, according to data reviewed to analyze the amount of separation between the lowest point of the proposed WMUs and where groundwater levels are, groundwater at the site is more than 50 feet below ground surface indicating that the risk of liquefaction at the project site is low.

The proposed improvements would also be required by State law to comply with all applicable 27 CCR and CBC seismic construction standards, including those relating to secondary seismic hazards such as liquefaction. Building code requirements may include, but are not limited to, ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. Adherence to all applicable regulations would avoid any potential impacts resulting from liquefaction at the project site. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.7-1(d): The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

As described above, the project is located on and surrounded by relatively flat to gently sloping terrain,. The project site is also not designated as a landslide hazard zone according to *Figure 12: Overlay Constraints: Seismic, Landslides, and Steep Slope Hazards* in the *Safety Element of the Kern County General Plan*. As a result, the likelihood of existing landslides adversely affecting the site is very low.

However, to construct the proposed new Class II landfills or WMUs, the project would include excavation and grading that would produce cut slopes followed by the creation of slopes from placement of waste materials that could be susceptible to either static or earthquake-induced landslides. Cut slopes for excavation of the new WMUs are proposed to be designed at a 2:1 (horizontal to vertical or H:V) ratio. Overall final cover slopes would be inclined at 3:1 (H:V), with interim 15-foot wide benches every 50 feet (vertical) (Geosyntech 2018). Waste materials are unloaded at the base of the landfill and placed in lifts up to 2 feet in thickness. Long term interim waste slopes for the proposed new WMUs would not exceed 3H:1V. These inclines are generally considered relatively stable but further analysis of slope stabilities is required by 27 CCR to more definitely make that assessment.

A slope stability analysis was performed for the proposed project in order to demonstrate that the proposed WMUs 36, 37, and 38 would be designed and constructed in accordance with 27 CCR 21750(f)(5) and the required minimum safety standards (i.e., factor of safety of 1.5 and/or limited seismic deformations that do not jeopardize the integrity of the landfill foundation, liner system, or other environmental controls). The analysis included evaluating three different stages of the proposed project representing the different conditions for the WMUs including the landfill construction (i.e., initial excavation), operation, and final

closure where the waste material is enclosed by the final cover. To achieve minimum factors of safety and acceptable seismic deformations, the liner system would need to meet certain specifications which would be confirmed as part of detailed design prior to construction in accordance with 27 CCR requirements. However, with adherence and consistency with those liner requirements, the slope stability analysis determined that all three stages of the proposed project would meet standards of safety for the site during the initial construction, interim waste placement and final design condition (Geosyntech 2018). Results of the stability analyses indicated that the cut slopes, interim waste slopes, and final cover slopes would have a minimum static factor of safety of 1.5 as required by Section 21750(f)(5). Seismic deformation analyses estimate deformations of approximately 6 inches for the MCE, which is less than the maximum allowable deformation of 6 to 12 inches (Geosyntech 2018).

Therefore, construction and operation of the proposed project in accordance with 27 CCR requirements would not result in adverse effects related to landslides and impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.7-2: The project would result in substantial soil erosion or the loss of topsoil.

Construction of the landfill Facility would include substantive earthwork activities for the excavation, grading and interim as well as final placement of cover materials once the proposed and permitted capacities are reached. The soils generated from the excavation of the WMUs would remain onsite and stockpiled for future use. These earthwork activities have the potential to expose large quantities of soils to the effects of water and wind erosion that would not otherwise occur at the project site.

The disturbance of soils during construction and the high wind forces could result in wind erosion and creation of fugitive dust. However, the project proponent would be required to comply with applicable San Joaquin Valley Air Pollution Control (SJVAPCD) fugitive dust control measures, as detailed in Mitigation Measure MM 4.3-1, which would require earthwork activities to include measures to reduce wind erosion.

Proposed operations include use of a 12-inch intermediate cover for areas where waste fill operations or additional cells are not to be constructed for periods greater than 180 days. The soil cover would be designed to resist erosion through grading that facilitates drainage in accordance with the drainage control plan for the project operations similar to what has been occurring at the current Facility. In addition, earthwork activities would be conducted in accordance with an updated SWPPP per the requirements of the NPDES General Construction Permit Program which includes BMPs to minimize the potential for erosion and loss of topsoil. All temporary erosion control measures required by the Kern County Grading Code (Section 17.28.140) would be incorporated into the SWPPP, as required by Mitigation Measure MM 4.7-3. In addition, per Mitigation Measure MM 4.7-4, the project proponent would be required to submit grading plans accompanied by a soils engineering report, engineering geology report, and drainage calculations pursuant to the Kern County Grading Code (Section 17.28.070) to the Kern County Public Works Department in order to obtain required grading permits. As a result, project construction

would have less-than-significant impacts related to erosion with adherence to these regulatory requirements and implementation of Mitigation Measures MM 4.7-3 through MM 4.7-4, compliance with the NPDES program, SJVAPCD regulations governing fugitive dust as listed in MM 4.3-1, the Kern County Grading Code, and applicable 27 CCR requirements would ensure that substantial erosion or loss of topsoil does not occur, and impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.3-1 (see Section 4.3, *Air Quality*, for mitigation measure), in addition to the mitigation measures listed below.

MM 4.7-3 The construction contractor shall incorporate best management practices consistent with the National Pollutant Discharge Elimination System General Construction Permit Program for all construction projects that would not retain all stormwater on-site and the Kern County Grading Code. The project proponent shall prepare or update the existing Erosion and Sedimentation Control Plan as well as a Stormwater Pollution Prevention Plan. The Stormwater Pollution Prevention Plan shall be prepared by a Qualified Stormwater Pollution Prevention Plan Developer and submitted for review and approval by the applicable Regional Water Quality Control Board. The Stormwater Pollution Prevention Plan best management practices shall include, but not be limited to, the following:

- a) Scheduling to avoid ground disturbance during rain events to the maximum extent possible;
- b) Preservation of existing vegetation and topography to the maximum extent practicable;
- c) Stabilized construction entrances and exits;
- d) Erosion control (including all pertinent temporary erosion control practices as specified in Chapter 17.28.140 of the Kern County Grading Code), such as mulching, temporary drains and cullies, sandbag barrier, geotextiles and mats, silt fences, brush or rock filters, earth dikes, straw bale barriers, and sediment traps;
- e) Sediment control;
- f) Waste management;
- g) Good housekeeping; and
- h) Post-construction site stabilization.

Prior to initial construction mobilization, preconstruction surveys shall be performed and sediment and erosion controls shall be installed in accordance with the approved Stormwater Pollution Prevention Plan. A copy of the approved Stormwater Pollution Prevention Plan shall be submitted to the Kern County Planning and Natural Resources Department.

MM 4.7-4 Prior to construction, the project proponent shall submit grading plans accompanied by a soils engineering report, engineering geology report, and drainage calculations pursuant to the Kern County Grading Code (Section 17.28.070) to the Kern County Public Works Department in order to obtain required grading permits.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.3-1, MM 4.7-3 and MM 4.7-4, impacts would be less than significant.

Impact 4.7-3: 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 above, the project site consists of flat to gently sloping topography. As discussed in Impact 4.7-1(d), the project would both create cut slopes during the excavation of the proposed WMUs and also create slopes through the placement of waste materials and soil cover. As mentioned above, a slope stability analysis for the proposed project activities was prepared and determined that the proposed activities would be consistent with required minimum factors of safety.

Lateral spreading, which is related to liquefaction, is the phenomena when liquefied materials move as a block toward an exposed face or slope. As discussed and analyzed above in Impact 4.7-1(d), the potential for liquefaction is very low due to the groundwater depths at the site, and impacts would be less than significant.

Subsidence could occur if the underlying materials could not support the new loadings that would occur with the placement of the waste materials that would extend above the current grade. In addition, potential issues associated with differential settlement (i.e., changes in the amount of settlement over different areas) of landfill cover systems that incorporate geosynthetic liners for the WMUs can include accumulation of water in depressions and strains in the geomembrane as a result (Geosyntec 2018). Differential settlement at landfills is addressed periodically to maintain positive surface water drainage in accordance with drainage control requirements. Differential settlement repair work is typically performed by filling the depression zone with compacted soil to the top of the final cover. The additional weight induced by the added soil could further increase the accumulation of strain in the geomembrane and the further development of differential settlements. However, the additional soil placed during the maintenance work would also increase the thickness of the soil cover which, in turn, would enhance the performance of the soil cover. Therefore, the repairs and maintenance implemented to address subsidence at the WMUs would be performed on an as needed basis to ensure the adequate performance of the soil cover but could continue strains on the geomembrane system. Regardless, adherence to the design requirements of 27 CCR which include design parameters for the liner, the leachate collection system, and closure design would ensure that any adverse effects associated with subsidence or related differential settlement are minimized. Implementation of Mitigation Measure 4.7-2 would ensure that the engineering design of the proposed WMUs would meet or exceed all applicable state and federal regulatory requirements and reduce any potential for subsidence to adversely affect the WMUs or other associated improvements.

In summary, based on existing subsurface characteristics and implementation of Mitigation Measure MM 4.7-2 as well as regulatory requirements that include stringent design requirements for the proposed WMUs, the potential impacts related to unstable soils including landslides, lateral spreading, collapse, and subsidence would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.7-2.

Level of Significance

Impacts would be less than significant with implementation of Mitigation Measure MM 4.7-2.

Impact 4.7-4: 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.

As discussed above, expansive soils are fine-grained soils (generally high plasticity clays) that can undergo volumetric changes with changes in water content. Over time, cyclical changes in the water content of a highly expansive soil can result in severe distress to structures constructed on or against the soil. According to the NRCS web soil survey data, the soils identified onsite include the Kimberlina series soils with a low potential for expansion and the Panoche series of soils which are considered slightly plastic and therefore could potentially have a potential for exhibiting some level of expansive properties. However, to definitively determine the susceptibility of expansive soils, requires laboratory testing of soil samples collected from the site.

All grading and construction on-site would adhere to the specifications, procedures, and site preparations contained in the final design plans, which would be fully compliant with the recommendations provided by the California-registered professional engineer in accordance with California and Kern County Building Code requirements, per Mitigation Measure MM 4.7-1. The required measures would encompass site preparation, such as treatment of expansive soils or replacement with engineered fill, as deemed necessary to minimize adverse effects related to expansive soils. The final designs would be subject to approval and follow-up inspection by the Kern County Building Inspection Department. Final design requirements would be provided to the on-site construction supervisor and the Kern County Building Inspector to ensure compliance. Therefore, with implementation of Mitigation Measures MM 4.7-1 impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.7-1.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.7-1, impacts would be less than significant.

Impact 4.7-5: 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 project site is an existing commercial waste management Facility that accepts solid, semi-solid, and liquid, hazardous and non-hazardous wastes for treatment, storage, or disposal. No septic tanks or alternative wastewater disposal systems would be constructed within the site as part of the proposed project; therefore, no impacts would occur.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.7-6: The project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The project site is underlain by Kimberlina Fine Sandy Loam, Kimberlina sandy loam, and Panoche clay loam. Paleontological sensitivity is not known for these soils but they may be underlain by older alluviums which may have a moderate potential to contain paleontological resources. If grading depths extend into the older alluvium deposits, significant vertebrate fossils may be encountered. Disturbance of such resources would result in a potentially significant impact to paleontological resources. Therefore, Mitigation Measure MM 4.7-5 would require cessation of ground-disturbing activities if a paleontological resource is found. With implementation of Mitigation Measures MM 4.7-5, impacts would be less than significant.

Mitigation Measures

MM 4.7-5. If a paleontological resource is found, the project contractor shall cease ground-disturbing activities within 50 feet of the find. The qualified paleontologist shall evaluate the significance of the resources and recommend appropriate treatment measures. At each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples shall be collected and submitted for analysis. Any fossils encountered and recovered shall be catalogued and donated to a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository.

Steps to Compliance:

- a. This mitigation measure shall be incorporated as a condition of approval.
- b. In the event paleontological resources are encountered during the course of grading or construction activities, the project proponent shall retain a qualified paleontologist to evaluate the significance of the resources and recommend appropriate treatment measures.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.7-5, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

Section 3.8 of this EIR discusses cumulative projects located within a 6-mile radius of the proposed project, as well as all similar (i.e., landfill, industrial) projects within Kern County. Table 3-10, *Cumulative Projects List*, in Chapter 3 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.

The project site is located in a seismically active area. Cumulative projects listed in Table 3-10, *Cumulative Projects List*, would all be required to comply with Kern County standards as well as the CBC and Kern County building code requirements to minimize the potential for cumulative impacts associated with seismic hazards. In addition, the effects of these projects are not considered to result in cumulatively significant effects from impacts to geology or soils because such impacts are site specific and would only have the potential to combine with impacts of the project if they occurred in the same location as the project. None of the cumulative projects would be located on or adjacent to the project site. As such, cumulative impacts resulting from seismic events and soil conditions are not anticipated to increase on a cumulative level.

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 4.9, *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 to mitigate erosion impacts). If the proposed project discharges stormwater, the proposed project would mitigate associated erosion impacts through implementation of a SWPPP and associated BMPs. 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 4.7-1 through MM 4.7-4 would reduce potential impacts associated with seismic hazards and soil erosion resulting from the proposed project; therefore, cumulative impacts are not considered cumulatively considerable.

Since no septic tanks or alternative wastewater disposal systems would be constructed within the site associated with the landfill Facility; therefore, no impacts would occur. Therefore, cumulative impacts on soils supporting septic tanks or alternative wastewater disposal systems would not be cumulatively considerable.

Cumulative impacts to paleontological resources in the project area could occur if other related projects, in conjunction with the proposed project, had or would result in impacts to paleontological resources that, when considered together, would be significant. Development of the proposed project, in combination with the other cumulative projects in the area, have the potential to contribute to a cumulatively significant paleontological resources impact due to the potential loss of paleontological resources unique to the region. However, Mitigation Measure 4.7-5 is included in this EIR to reduce potentially significant project impacts to paleontological resources during construction of the proposed composting and bioenergy facilities. Implementation of these mitigation measures would reduce potential

impacts to paleontological resources to a less-than-significant level. Therefore, cumulative impacts would be less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measures 4.7-1 through MM 4.7-5.

Level of Significance after Mitigation

With implementation of Mitigation Measures MM 4.7-1 through MM 4.7-5, cumulative impacts would be less than significant.

4.8.1 Introduction

This section of the EIR describes the affected environment and regulatory setting relating to greenhouse gases (GHGs) for the project. This section also describes the impacts associated with GHGs that would result from implementation of the project, and, as necessary, mitigation measures that would reduce these impacts.

Information in this section is based primarily on the GHG section of the project's air quality technical report, *Greenhouse Gas Emissions Technical Report*, located in Appendix G of this EIR and incorporated by reference herein. The impact assessment for the project is also based upon a review of relevant literature and technical reports that include, but are not limited to, information and guidelines by the California Air Resources Board (CARB), U.S. Environmental Protection Agency (USEPA), and the applicable provisions of the California Environmental Quality Act (CEQA).

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 emissions within the State of California and the United States, respectively. While the CARB has the primary regulatory responsibility within California for GHG emissions, local agencies can also adopt policies for GHG emission reduction. The CARB has divided California into regional air basins. The project is in unincorporated Kern County, which is within the San Joaquin Valley Air Basin (SJVAB), and under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD).

Climate Change

GHGs are gases in the atmosphere that trap heat. The major concern with GHGs is that increases in GHG concentrations in the atmosphere are causing global climate change, which is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to GHGs from human activities, most in the world-wide scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases (i.e., global warming).

According to CARB, the potential impacts in California due to global climate change may include: loss in snow pack; sea level rise; more extreme heat days per year; more high ozone days; larger forest fires; more drought years; increased erosion of California's coastlines and seawater intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation. 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:

- 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
- More intense precipitation events

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, ocean acidification (including coral bleaching), impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood, the potential for substantial environmental, social, and economic consequences over the long-term may be great.

Greenhouse Gases

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, however, absorb some of 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 consistent. However, many gases exhibit the "greenhouse" properties. Some of them occur in nature (water vapor, carbon dioxide, methane, and nitrous oxide) while others are exclusively human-made (e.g., gases used for aerosols). The principal GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs), are listed below.

- **Carbon dioxide:** CO₂ enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and chemical reactions (e.g., the manufacture of cement). CO₂ is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
- **Methane:** CH₄ is emitted during the production and transport of coal, natural gas, and oil. CH₄ emissions also result from livestock and agricultural practices and the decay of organic waste in municipal solid waste landfills.
- **Nitrous oxide:** N₂O is emitted during agricultural and industrial activities and during combustion of fossil fuels and solid waste.
- **Fluorinated gases:** HFCs, PFCs, and SF₆ are synthetic, powerful climate-change gases emitted from a variety of industrial processes. Fluorinated gases are often used as substitutes for ozone-depleting substances (i.e., chlorofluorocarbons, hydrochlorofluorocarbons, and halons). These gases are typically emitted in minute quantities, but because they are potent climate-change gases, they are sometimes referred to as high Global Warming Potential (GWP) gases.
- **Sulfur hexafluoride:** SF₆ is a colorless, odorless, nontoxic, nonflammable gas. SF₆ 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. The California Climate Action Registry (Registry) lists SF₆ as 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.

Because different GHGs have different GWPs and CO₂ is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO₂ equivalents (CO₂e). For example, SF₆ is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF₆, while comprising a small fraction of the total GHGs emitted annually worldwide, is a much more potent GHG with 22,800 times the GWP as CO₂. Therefore, an emission of 1 metric ton (MT) of SF₆ could be reported as an emission of 22,800 MTCO₂e (CARB 2014, as cited in Appendix G). Large emissions sources are reported in million MT (MMT) of CO₂e (MMTCO₂e).

Greenhouse Gas Emissions Inventories

California produced approximately 425 gross MMTCO₂e in 2018, which is below the State's GHG reduction target of 1990 level GHG emissions (i.e., 431 MMTCO₂e) by 2020. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2016, accounting for approximately 40 percent of total GHG emissions in the state. This sector was followed by the industrial sector at approximately 21 percent and the electric power sector (including both in-state and out-of-state sources) at approximately 15 percent (CARB 2019, as cited in Appendix G). CARB has projected that, unregulated, statewide GHG emissions for the year 2020 will be approximately 509 MMTCO₂e. These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions. California GHG emissions by economic sector from 2009 to 2017 are summarized in **Table 4.8-1**, *California Greenhouse Gas Emissions (MMTCO₂e)*.

TABLE 4.8-1: CALIFORNIA GREENHOUSE GAS EMISSIONS (MMTCO₂E)

Emission Inventory Category	2010	2011	2012	2013	2014	2015	2016	2017	2018
Transportation	165.1	161.8	161.4	161.2	162.6	166.2	169.8	171.0	169.5
Electric Power	90.3	89.2	98.2	91.4	88.9	84.8	68.6	62.1	63.1
Industrial	91.0	89.3	88.9	91.6	92.4	90.1	88.9	88.7	89.2
Commercial and Residential	45.9	46.0	43.5	44.2	38.2	38.8	40.6	41.3	41.4
Agriculture	33.7	34.4	35.5	33.8	34.8	33.4	33.2	32.3	32.6
High GWP Gases	13.5	14.5	15.5	16.8	17.7	18.6	19.3	20.0	20.5
Recycling and Waste	8.7	8.7	8.7	8.7	8.8	8.8	8.9	9.0	9.1
Total GHG Emissions	448.2	443.9	451.7	447.7	443.4	440.7	429.3	424.4	425.4

* GHG emissions are weighted using the IPCC AR4.

Source: CARB 2020b

Kern County Greenhouse Gas Inventory

On May 3, 2011, the Kern County Board of Supervisors signed a memorandum of understanding with the SJVAPCD to develop a communitywide GHG emissions inventory for the County. The *Kern County Communitywide GHG Emissions Inventory 2005 Baseline Year – 2020 Forecast* was finalized in May 2012. The GHG emission inventories were estimated for nine primary sectors (electricity production and consumption, residential/commercial/ industrial combustion, transportation, fossil fuels industry, industrial processes, waste management, agriculture, forestry and land use, and other sources). The 2005 base year and 2020 forecasted GHG emissions inventory is presented below in **Table 4.8-2**, *Kern County Greenhouse*

Gas Emissions (MTCO_{2e}). As shown therein, the 2005 base year GHG emissions inventory was estimated at 27.0 MMTCO_{2e} and the 2020 forecasted GHG emissions inventory was estimated to be 27.3 MMTCO_{2e}. Electricity production was estimated to generate 13,002,127 MTCO_{2e} in 2005 and 18,455,958 MTCO_{2e} in 2020. Electricity consumption during both the 2005 base year and 2020 forecasted year is provided in Table 4.8-2.

TABLE 4.8.2-1: KERN COUNTY GREENHOUSE GAS EMISSIONS (MTCO_{2E})

Sector	2005 Base Year Emissions	Percent of 2005 Total	2020 Forecasted Emissions	Percent of 2020 Total
Electricity Consumption	6,039,114	22%	8,572,261	31%
Residential/Commercial/Industrial Combustion	1,281,498	5%	1,689,414	6%
Transportation	4,569,913	17%	4,823,756	18%
Fossil Fuels Industry	10,928,153	40%	7,002,009	26%
Industrial Processes	1,852,124	7%	2,348,754	9%
Waste Management	120,494	<1%	146,788	1%
Agriculture	2,024,470	7%	2,652,616	10%
Forestry and Land Use	11,028	<1%	14,669	<1%
Other Sources	218,823	1%	22,442	<1%
Total Gross Emissions	27,045,617		27,272,709	

Source: SJVACPD 2012

4.8.3 Regulatory Setting

Federal

U.S. Environmental Protection Agency

The Federal Clean Air Act (CAA) requires the USEPA to define national ambient air quality standards to protect public health and welfare in the United States. The USEPA has not established any ambient air quality standards for GHGs as the CAA does not specifically regulate GHG emissions; however, on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency* (549 U.S. 497 (2007)), the U.S. Supreme Court found that GHGs are pollutants covered by the CAA. The Court held that the USEPA must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution that could reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the USEPA is required to follow the language of CAA Section 202(a). The Supreme Court decision resulted from a petition for rulemaking under Section 202(a) filed by more than a dozen environmental, renewable energy, and other organizations. Currently, there are no Federal regulations that establish ambient air quality standards for GHGs.

On April 17, 2009, the Administrator signed Proposed Endangerment and Cause or Contribute findings for GHGs under CAA Section 202(a). The USEPA held a 60-day public comment period, which ended June 23, 2009, and received over 380,000 public comments. These included both written comments as well as testimony at two public hearings in Arlington, Virginia and Seattle, Washington. The USEPA carefully reviewed, considered, and incorporated public comments and issued the final Findings.

The USEPA found that six GHGs taken in combination endanger both the public health and the public welfare of current and future generations. The USEPA also found that the combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that endangers public health and welfare under CAA Section 202(a). These findings were based on careful consideration of the full weight of scientific evidence and a thorough review of numerous public comments received on the Proposed Findings published April 24, 2009. These Findings became effective on January 14, 2010. Specific GHG Regulations that the USEPA has adopted to date are discussed below.

40 Code of Federal Regulations Part 98, Mandatory Reporting of Greenhouse Gases Rule

This rule requires mandatory reporting of GHG emissions for facilities that emit more than 25,000 MTCO_{2e} emissions per year. Additionally, reporting of emissions is required for owners of SF₆- and PFC-insulated equipment when the total nameplate capacity of these insulating gases is above 17,280 pounds. The project, including stationary sources, would not be expected to trigger Federal GHG reporting according to the rule.

In 40 CFR Part 52, Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, the USEPA mandated to apply Prevention of Significant Deterioration (PSD) requirements to facilities whose stationary source CO_{2e} emissions exceed 75,000 tons per year.

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).

Clean Power Plan and New Source Performance Standards for Electric-Generating Units

On October 23, 2015, the USEPA published a final rule (effective December 22, 2015) establishing Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribed how States must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric-generating units. Implementation of the Clean Power Plan was subsequently stayed by the U.S. Supreme Court pending resolution of several lawsuits challenging the plan.

On March 28, 2017, President Donald Trump signed Executive Order (EO) 13783 calling for USEPA review of the Clean Power Plan.

Affordable Clean Energy Rule

On June 19, 2019, the USEPA published a final rule repealing the Clean Power Plan, adopting the Affordable Clean Energy (ACE) rule requiring States to prepare and submit to the USEPA plans that establish CO₂ performance standards for certain existing coal-fired electric utility-generating units within their jurisdiction, and finalizing regulations governing implementation of the ACE rule and any future emissions guidelines that the USEPA may issue under CAA Section 111(d). Also, on June 19, 2019, California Governor Gavin Newsom's office published a press release stating that California "and a coalition of states" will initiate a legal challenge of the ACE.

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.

In August 2018, the USEPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards now in place, the 2018 proposal would increase U.S. fuel consumption by about half a million barrels per day (2 to 3% of total daily consumption, according to the U.S. Energy Information Administration [USEIA]) and would impact the global climate by 3/1000th of 1 degree Celsius by 2100. California and 16 other states have filed a lawsuit to challenge Federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. Thus, the timing and consequences of the 2018 Federal proposal are speculative at this time. Further, the chair of the CARB announced that the CARB will continue to file lawsuits to reverse any Trump administration decision to lessen vehicle efficiency standards, decline to allow California to enforce more stringent vehicular air pollution standards under the waiver procedure established by the Federal CAA, or otherwise reduce the stringency of Federal air pollution regulations, and has further announced CARB's intention to continue to independently enforce Federal standards in California while such lawsuits are pending. It is not reasonably foreseeable that less stringent Federal air pollution standards will be applicable to the project given independent California authority, the length of time required to complete the Federal litigation process, the absence of any injunction precluding California from enforcing more stringent Federal standards while such lawsuits are present, and the CARB's announced intention to continue to enforce Federal air regulations rescinded or modified by the Trump administration.

On September 27, 2019, the USEPA and NHTSA published the SAFE Rule (Part One). The SAFE Rule (Part One) went into effect in November 2019, and revoked California's authority to set its own GHGs standards and set zero emission vehicle mandates in California. The SAFE Rule (Part One) freezes new zero emission vehicles (ZEV) sales at model year 2020 levels for year 2021 and beyond, and will likely result in a lower number of future ZEVs and a corresponding greater number of future gasoline internal combustion engine vehicles. In response to the USEPA's adoption of the SAFE Rule (Part One), CARB issued guidance regarding the adjustment of vehicle emissions factors to account for the rule's implications on criteria air pollutant and greenhouse gas emissions. The SAFE Rule is subject to ongoing litigation and

on February 8, 2021, the D.C. Circuit Court of Appeals granted the Biden Administration’s motion to stay litigation over Part 1 of the SAFE Rule. On April 22 and April 28, 2021, respectively, NHTSA and USEPA formally announced their intent to reconsider the Safe Rule (Part One).

In December 2021, the USEPA finalized federal GHG emissions standards for passenger cars and light trucks for Model Years 2023 through 2026. These standards are the strongest vehicle emissions standards ever established for the light-duty vehicle sector and are based on sound science and grounded in a rigorous assessment of current and future technologies. The updated standards will result in avoiding more than 3 billion tons of GHG emissions through 2050.

Fuel Efficiency Standards for Construction Equipment

The Federal government sets fuel efficiency standards for non-road diesel engines that are used in construction equipment. The regulations, contained in 40 CRF Parts 1039, 1065, and 1068, include multiple tiers of emission standards. Most recently, the USEPA adopted a comprehensive national program to reduce emissions from non-road diesel engines by integrating engine and fuel controls as a system to gain the greatest reductions. To meet these Tier 4 emission standards, engine manufacturers will produce new engines with advanced control technologies.

State

Executive Order S-1-07

Executive Order S-1-07 recognizes that the main source of GHG emissions in California is from the transportation sector, and establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least 10 percent by 2020. As a result of Executive Order S-1-07, CARB approved a proposed regulation to implement the Low Carbon Fuel Standard (LCFS) to reduce GHG emissions from the transportation sector in California by approximately 16 MMTCO_{2e} by 2020. The LCFS is designed to reduce California’s dependence on petroleum, create a lasting market for clean transportation technology, and stimulate the production and use of alternative, low-carbon fuels in California. The LCFS is designed to provide a durable framework that establishes performance standards that fuel producers and importers must meet each year beginning in 2011.

Executive Orders S-3-05

Executive Order S-3-05 sets target dates to reduce statewide GHG emissions to historical levels, as follows:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

In response to EO S-3-05, California Environmental Protection Agency (CalEPA) created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the “2006 CAT Report”). The 2006 CAT Report identified a recommended list of strategies that the State could pursue to reduce GHG emissions. These are strategies that could be implemented by various State agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the State

agencies. The strategies include, but are not limited to, the reduction of passenger and light-duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture.

Assembly Bill 32

Assembly Bill (AB) 32 (Nunez, 2006), the California Global Warming Solutions Act of 2006, was enacted after considerable study and expert testimony before the Legislature. The heart of AB 32 is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. In order to achieve this reduction mandate, AB 32 requires California Air Resources Board to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.

In 2007, CARB approved a statewide limit on the GHG emissions level for year 2020 consistent with the determined 1990 baseline. CARB's adoption of this limit is in accordance with Health & Safety Code Section 38550, as codified through enactment of AB 32.

Per Health & Safety Code Section 38561(b), CARB also is required to prepare, approve and amend a scoping plan that identifies and makes recommendations on "direct emission reduction measures, alternative compliance mechanisms, market-based compliance mechanisms, and potential monetary and nonmonetary incentives for sources and categories of sources that [CARB] finds are necessary or desirable to facilitate the achievement of the maximum feasible and cost-effective reductions of greenhouse gas emissions by 2020."

In 2008, CARB adopted the Climate Change Scoping Plan: A Framework for Change (2008 Scoping Plan) in accordance with Health & Safety Code Section 38561. During the development of the 2008 Scoping Plan, CARB created a planning framework that is comprised of eight emissions sectors: (1) transportation; (2) electricity; (3) commercial and residential; (4) industry; (5) recycling and waste; (6) high GWP gases; (7) agriculture; and (8) forest net emissions. The 2008 Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions from the eight emissions sectors to 1990 levels by 2020.

In the 2011 Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (2011 Final Supplement), CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. In 2016, Senate Bill (SB) 32 and its companion bill, AB 197, amends HSC Division 25.5 and establishes a GHG reduction target of 40 percent below 1990 levels by 2030, and includes provisions to ensure the benefits of State climate policies reach into disadvantaged communities.

AB 32 Scoping Plan Resolutions for Waste Management Sector

In the October 2011 Scoping Plan Resolution 11-32, CARB directed staff to work with the California Department of Resources Recycling and Recovery (CalRecycle) and other stakeholders to characterize emission reduction opportunities for handling solid waste, including recycling, reuse, remanufacturing of recovered materials; composting and anaerobic/aerobic digestion; biomass conversion; waste thermal processes; and landfilling.

Further, in the September 2012 Cap-and-Trade Regulation Resolution 12-33, CARB directed staff to propose a comprehensive approach for the most appropriate treatment of the Waste Sector under the Cap-and-Trade program based upon the analysis of emission reduction opportunities.

AB 32 Waste Management Sector Plan

To achieve the 75% recycling goal of AB 341 and to inform the development of the First Update to the Scoping Plan, CARB and CalRecycle established a joint workgroup to begin developing a Waste Sector Plan. The first task of this group was to prepare a series of background technical papers to assist in understanding the issues critical to the development of a Waste Sector Plan. The five technical papers cover:

- Recycling, reuse, and remanufacturing
- Composting and anaerobic digestion
- Biomass conversion
- Municipal solid waste thermal technologies
- Landfilling of waste

Each paper provides a general description of the waste treatment process, discusses current activities, and identifies opportunities for greater GHG and waste reductions in the future. Each paper also discusses key challenges to achieving a sustainable, low-carbon waste management future and identifies potential solutions to those challenges.

In addition to the technical papers, CARB, CalRecycle, and the Department of General Services have been working together to identify opportunities for even greater State leadership in waste reduction efforts through environmentally preferred purchasing.

2014 First Update to the Scoping Plan

In 2014, CARB adopted the First Update to the Climate Change Scoping Plan: Building on the Framework (2014 First Update). The stated purpose of the 2014 First Update is to “highlight [...] California’s success to date in reducing its GHG emissions and lay [...] the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.” The 2014 First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals.

In conjunction with the 2014 First Update, CARB identified “six key focus areas comprising major components of the State’s economy to evaluate and describe the larger transformative actions that will be needed to meet the State’s more expansive emission reduction needs by 2050.” Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The 2014 First Update identifies key recommended actions for each sector that will facilitate achievement of the 2050 reduction target.

Based on CARB’s research efforts, it has a “strong sense of the mix of technologies needed to reduce emissions through 2050.” Those technologies include energy demand reduction through efficiency and activity changes;

large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

As part of the 2014 First Update, CARB recalculated the State's 1990 emissions level using more recent global warming potentials identified by the IPCC. Using the recalculated 1990 emissions level and the revised 2020 emissions level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15.3 percent (instead of 28.5 percent or 16 percent) from the business-as-usual (BAU) conditions.

The 2014 First Update included a strong recommendation from CARB for setting a mid-term statewide GHG emissions reduction target. CARB specifically recommended that the mid-term target be consistent with: (i) the United States' pledge to reduce emissions 42 percent below 2005 levels (which translates to a 35 percent reduction from 1990 levels in California); and (ii) the long-term policy goal of reducing emissions to 80 percent below 1990 levels by 2050.

The 2014 First Update discussed new residential and commercial building energy efficiency improvements, specifically identifying progress towards zero net energy buildings as an element of meeting mid-term and long-term GHG reduction goals. The 2014 First Update expressed CARB's commitment to working with the California Public Utilities Commission (CPUC) and CEC to facilitate further achievements in building energy efficiency.

2017 Scoping Plan

In November 2017, CARB published California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), which was subsequently adopted by CARB's Board in December 2017. The 2017 Scoping Plan identifies CARB's strategy for achieving the State's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below). The strategy includes continuation of the Cap-and-Trade Program through 2030, and incorporates a Mobile Source Strategy that includes strategies targeted to increase zero emission vehicle fleet penetration and a more stringent target for the Low Carbon Fuel Standard by 2030. The 2017 Scoping Plan also incorporates approaches to cutting short-lived climate pollutants (SLCPs) under the Short-Lived Climate Pollutant Reduction Strategy (a planning document that was adopted by CARB in March 2017), and acknowledges the need for reducing emissions in agriculture and highlights the work underway to ensure that California's natural and working lands increasingly sequester carbon.

When discussing project-level GHG emissions reduction actions and thresholds, the 2017 Scoping Plan states:

“Project-Level Greenhouse Gas Emissions Reduction Actions and Thresholds

Beyond plan-level goals and actions, local governments can also support climate action when considering discretionary approvals and entitlements of individual projects through CEQA [California Environmental Quality Act]. Absent conformity with an adequate geographically-specific GHG reduction plan ..., CARB recommends that projects incorporate design features and GHG reduction measures, to the degree feasible, to minimize GHG emissions. Achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development.

Achieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA.

California’s future climate strategy will require increased focus on integrated land use planning to support liveable, transit-connected communities, and conservation and other lands. Accommodating population and economic growth through travel- and energy-efficient land use provides GHG-efficient growth, reducing GHGs from both transportation and building energy use. GHGs can be further reduced at the project level through implementing energy-efficient construction and travel demand management approaches.”

Senate Bill 97

SB 97 was enacted requiring the Office of Planning and Research (OPR) to develop guidelines for the mitigation of GHG emissions, or the effects related to releases of GHG emissions. OPR submitted proposed amendments to the Natural Resources Agency in accordance with SB 97 regarding analysis and mitigation of GHG emissions. As directed by SB 97, the Natural Resources Agency adopted Amendments to the *CEQA Guidelines* for GHG emissions, which became effective in 2010.

Senate Bill 32 and Assembly Bill 197

Enacted in 2016, SB 32 (Pavley, 2016) codifies the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030.

SB 32 was coupled with a companion bill: AB 197 (Garcia, 2016). Designed to improve the transparency of CARB’s regulatory and policy-oriented processes, AB 197 created the Joint Legislative Committee on Climate Change Policies, a committee with the responsibility to ascertain facts and make recommendations to the Legislature concerning statewide programs, policies, and investments related to climate change. AB 197 also requires CARB to make certain GHG emissions inventory data publicly available on its web site; consider the social costs of GHG emissions when adopting rules and regulations designed to achieve GHG emission reductions; and include specified information in all Scoping Plan updates for the emission reduction measures contained therein.

Executive Order B-55-18

In September 2018, Governor Brown signed EO B-55-18, which established a new statewide goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” This EO directs CARB to “work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.”

In January 2019, CARB held a workshop regarding carbon neutrality in California, during which CARB staff explained that the definitional parameters and meaning of the term – carbon neutrality – are still being explored. CARB intends to hold additional workshops to explore specific topics related to the pursuit of carbon neutrality, engage with other experts in the field and stakeholders, and conduct research to ensure that any path to carbon neutrality balances scientific, economic and social justice principles.

Senate Bill 375

SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. CARB adopted the vehicular GHG emissions reduction targets, in consultation with the metropolitan planning organizations (MPOs), which require a 7 to 8 percent reduction by 2020 and a 13 to 16 percent reduction by 2035, for each MPO. SB 375 recognizes the importance of achieving significant

GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs, such as the Kern Council of Governments (KCOG), will work with local jurisdictions in the development of sustainable community strategies (SCS) designed to integrate development patterns and the transportation network in a way that reduces GHG emissions while meeting housing needs and other regional planning objectives. KCOG's reduction target for per capita vehicular emissions is 5 percent by 2020 and 10 percent by 2035.

California Green Building Standard Code

The State of California adopted the 2010 CALGreen Code, which became effective in January 2011. Building off of the initial 2008 California Green Building Code, the 2010 CALGreen Code represents a more stringent building code that requires, at a minimum, that new buildings and renovations in California meet certain sustainability and ecological standards. The 2010 CALGreen Code has mandatory Green Building provisions for all new residential buildings that are three stories or fewer (including hotels and motels) and all new non-residential buildings of any size that are not additions to existing buildings.

The California Building Standards Commission adopted the 2013 California Building Standards Code that also included the latest 2013 CALGreen Code, which became effective on January 1, 2014. The mandatory provisions of the code are anticipated to reduce GHG emissions by 3 MMTCO₂e by 2020, reduce water use by 20 percent or more, and divert 50 percent of construction waste from landfills. Additionally, the California Building Code includes a requirement for a 20 percent reduction in indoor potable water usage. The 2013 California Energy Code (Title 24, Part 6), which is also part of the CALGreen Code (Title 24, Part 11, Chapter 5.2), became effective on July 1, 2014.

California Renewables Portfolio Standard

First established in 2002 under SB 1078, California's Renewables Portfolio Standard (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent by 2020 and 50 percent 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 percent of retail sales by the end of 2024, 52 percent by the end of 2027, and 60 percent by the end of 2030; and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045. The California Public Utilities Commission (CPUC) and the CEC jointly implement the RPS program. 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.

SB 605

Short-lived climate pollutants (SLCP) (i.e., black carbon, fluorinated gases, and methane) are powerful climate forcers that remain in the atmosphere for a much shorter period of time than longer-lived climate pollutants. Their relative potency, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO₂. The impacts of short-lived climate pollutants are especially strong over the short term. Reducing these emissions can make an immediate beneficial impact on climate change. Governor Brown signed SB 605 on September 21, 2014, directing CARB to

develop a Short-Lived Climate Pollutant Strategy by January 1, 2016. On May 7, 2015, CARB released a concept paper for reducing emissions of these substances. In September 2015, CARB released a draft of their Short-Lived Climate Pollutant Strategy, which was subsequently revised in April 2016 and then again in November 2016

Senate Bill 100

SB 100 (De León, also known as the “California Renewables Portfolio Standard Program: emissions of greenhouse gases”) was approved by the California legislature and signed by Governor Brown in September 2018. The bill increases RPS in 2030 from 50 percent to 60 percent and establishes a goal of 100 percent RPS by 2045.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combined 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, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75 percent less smog-forming pollution than the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the EPA and NHTSA, has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34 percent in 2025. The Zero Emissions Vehicle (ZEV) program will act as the focused technology of the Advanced Clean Cars program by requiring manufactures to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in 2018 to 2025 model years.

Regional

2018 Regional Transportation Plan/Sustainable Communities Strategy

As previously discussed, SB 375 requires Kern COG to incorporate a Sustainable Communities Strategy into its RTP that achieves the GHG emission reduction targets set by CARB. Kern COG’s Sustainable Communities Strategy was first included in the 2014 Regional Transportation Plan & Sustainable Communities Strategy (RTP/SCS), which was adopted by Kern COG in June 2014. The original plan has since been superseded by the RTP/SCS adopted by Kern COG in August 2018.

In general, the goals and policies of the Sustainable Communities Strategy are to improve mobility, accessibility, reliability, efficiency, liveability, sustainability, and equity. The Sustainable Communities Strategy adopted by Kern COG is expected to reduce per capita transportation emissions by 12.5% by 2020 and by 12.7% by 2035, as compared to 2005 baseline levels.

In July 2015, CARB accepted Kern COG’s determination that the Sustainable Communities Strategy would meet the region’s GHG reduction targets per Government Code Section 65080(b)(2)(J)(ii), as memorialized in CARB’s Resolution 15-38.

Pursuant to Government Code Section 65080(b)(2)(K), a Sustainable Communities Strategy does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it.

San Joaquin Valley Air Pollution Control District

While CARB is responsible for the regulation of mobile emission sources within the State, local air quality management districts (AQMDs) and air pollution control districts (APCDs) are responsible for enforcing standards and regulating stationary sources. The project area is located within the San Joaquin Valley Air Basin and is subject to the San Joaquin Valley Air Pollution Control District (SJVAPCD) guidelines and regulations.

In December 2009, the San Joaquin Valley Unified Air Pollution Control District (District) issued its Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (Guidance). In its Guidance, the District recommends determining the significance of project-specific GHG emissions by using Best Performance Standards (BPS). Under the Guidance, a project's impacts on global climate change would be less than significant if the project implements BPS, or if the project reduces or mitigates its GHG emissions by 29 percent, consistent with the statewide GHG emission reduction targets established in the 2008 Scoping Plan. The District also adopted the District Policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. This policy aligns with the Guidance process for evaluating GHG significance, specific to stationary source projects.

Also, in June 2014, the District released APR – 2025, CEQA Determinations of Significance for Projects Subject to [CARB]'s GHG Cap-and-Trade Regulation (APR – 2025). In APR - 2025, the District concluded that GHG emissions increases that are otherwise covered under CARB's Cap-and-Trade Program cannot constitute significant increases in emissions under CEQA for two separate reasons: (1) the Cap-and-Trade Program is an adopted statewide regulation for reducing GHG emissions from targeted industries/sources; and (2) GHG emissions addressed by the Cap-and-Trade Program are subject to an industry-wide, decreasing emissions cap. More specifically, the District concluded that "all GHG emission increases resulting from the combustion of any fuel produced, imported, and/or delivered in California are mitigated under Cap-and-Trade. Therefore, GHG emission increases caused by fuel use (other than jet fuels) are determined to have a less than significant impact on global climate change under CEQA."

In March 2015, the District issued its Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), which provides technical guidance for the review of air quality impacts from proposed projects within the boundaries of the District. This guidance recommends an approach for evaluating the significance of a proposed project's GHG emissions; specifically, whether a proposed project would have reduced or mitigated GHG emissions by 29%, consistent with GHG emission reduction targets established in the CARB's Scoping Plan. The guidance recommends the following hierarchy for evaluating a proposed project's impact with respect to its GHG emissions:

- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less-than-significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA-compliant environmental review document adopted by the lead agency. Projects

complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement Best Performance Standards.

- Projects implementing Best Performance Standards would not require quantification of project-specific GHG emissions. Consistent with the CEQA Guidelines, such projects would be determined to have a less-than-significant individual and cumulative impact for GHG emissions.

While the GAMAQI discussions include a comparison to a BAU approach, the Center for Biological Diversity v. California Department of Fish and Wildlife Court Decision established additional standards for such an approach. Due to that court decision, the comparison to BAU approach will not be relied upon in this analysis.

Local

Kern County General Plan

The Land Use, Open Space, and Conservation Element of the Kern County General Plan provides goals, policies, and implementation measures applicable to air quality, and as related to the project, would also reduce project GHG emissions. These goals, policies, and implementation measures 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, Conservation, and Open Space Element

Air Quality

Policies

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:

- 1 All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
- 2 The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.

Implementation Measures

Measure G: Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:

1. Minimizing idling time.
2. Electrical overnight plug-ins.

Measure H: Discretionary projects may use one or more of the following to reduce air quality effects:

1. Pave dirt roads within the development.
2. Pave outside storage areas.
3. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
4. Use of alternative fuel fleet vehicles or hybrid vehicles.
5. Use of emission control devices on diesel equipment.
6. Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces.
7. Provide bicycle lockers and shower facilities on site
8. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
9. The use and development of park and ride facilities in outlying areas.
10. Other strategies that may be recommended by the local Air Pollution Control Districts.

Chapter 5. Energy Element

Solar Energy Development

Policies

Policy 1: The County shall encourage domestic and commercial solar energy uses to conserve fossil fuels and improve air quality.

Policy 3: The County should permit solar energy development in the desert and valley planning regions that does not pose significant environmental or public health and safety hazards.

In 2009, the Kern County Board of Supervisors approved the proposed list of Energy, Efficiency, and Conservation projects for which the County will request funding under the provisions of the American Recovery and Reinvestment Act of 2009. The Kern County Planning and Natural Resources Department has requested an allocation for the preparation of a Climate Change Action Plan (CCAP) for the County General Plan. California's Climate Change Scoping Plan calls for local governments to reduce GHG emissions through the adoption of local programs as an important strategy to reduce community scale GHG emissions. Project conformance with an adopted CCAP would ensure the goal of AB 32 can be attained with the project.

Kern County Climate Adaptation Plan

The climate adaptation plan for Kern County expects that Kern County will see higher daily temperatures, more heatwaves, increased wildfires, and a diminished snowpack within this century. By 2050, the change expected is a 3-4°F increase in winter average temperature and 5-6°F increase in summer average temperature. An additional 3-5 days of heat waves are anticipated along with a decline of 1-2 inches of precipitation. The recommendations particularly pertinent to this report call for 1) an increased usage of

zero or near-zero emission and fuel-efficient vehicles—including vehicles that use cleaner diesel fuel and biofuels, 2) improved energy supply and distribution efficiency and shift toward renewable heat and power sources like solar, and 3) an effective, solid waste management plan to reduce source generation and to divert waste from landfills to achieve emission reductions.

4.8.4 Impacts and Mitigation Measures

Methodology

The approach to analysis is described in this discussion. For a detailed discussion of the estimating tools and assumptions used, please see the Greenhouse Gas Emissions Technical Report (Appendix G), Section 4.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Construction

While the exact construction schedule and equipment mix may vary from the current analysis, the GHG emissions are not expected to be higher than that calculated given the conservative assumptions included in this analysis.

The major construction phases included in this analysis are:

1. **Site Preparation:** involves clearing vegetation (grubbing and tree/stump removal) and removing stones and other unwanted material or debris prior to grading.
2. **Grading:** involves the cut and fill of land to ensure the proper base and slope for the construction foundation.
3. **Paving:** involves the laying of concrete or asphalt such as in parking lots or roads.
4. **Building Construction:** involves the construction of structures and buildings.
5. **Plastic Liner Installation:** involves the installation of a plastic liner for each WMU

GHG emissions from these construction phases are largely attributable to fuel use from construction equipment usage onsite and worker commuting vehicles.

The analysis primarily used Excel calculations to quantify the construction emissions. The modeled construction schedule is shown in Appendix G. The construction off-road equipment list is a project-specific estimate; the off-road equipment specifications are based on CalEEMod model defaults.

Operations

The operational emissions were calculated with CalEEMod and separately for mobile source, electricity use, landfill gas, and operational off-road equipment emissions. Operational GHG emissions are calculated for water usage, electricity usage, solid waste generated, on-road mobile trips, off-road operational equipment, and stationary sources. Operational emissions are evaluated for baseline conditions in 2018 and for the first year of project operation in 2022.

Thresholds of Significance

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

A project would have a significant impact on GHGs 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 an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Kern County has not developed a quantitative threshold of significance for GHG emissions.

SJVAPCD has adopted guidance documents for assessing and mitigating GHG impacts on global climate change. Rather than establishing specific numeric thresholds of significance (as in the case of criteria pollutant emissions), the SJVAPCD guidance utilizes a tiered approach to assess cumulative impacts on global climate change. First, a project can demonstrate compliance with an approved GHG emissions reduction program (such as CARB's statewide GHG Cap-and-Trade Program). Second, a project can demonstrate implementation of BPS to reduce GHG emissions. Previously a project could demonstrate

achievement of a 29% reduction in GHG emissions from BAU. However, this last method is not relied upon in this analysis.

SJVAPCD’s CEQA Cap-and-Trade Policy also recommends that projects that are required to comply with CARB’s GHG Cap-and-Trade Program be determined to have a less than cumulatively significant impact on global climate change. This policy is included in the SJVAPCD’s December 2009 CEQA GHG policies and its 2015 GAMAQI which states that a project whose emissions have been reduced or mitigated consistent with the California Global Warming Solutions Act of 2006 (AB 32) should be considered to have a less than significant impact on global climate change.

This EIR, relative to Threshold 1, quantifies the project’s GHG emissions during operation and construction. This EIR, relative to Threshold 2, evaluates the project for consistency with applicable plans related to GHG emissions, including the state’s AB32 and SB375.

Project Impacts

Impact 4.8-1: The project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

As shown in **Table 4.8-3, Project Emissions**, the project emissions are 42,625 MT CO₂e per year. The majority of this increase is driven by increased waste hauling truck activity and landfill gas emissions. SJVAPCD prepared a forecasted 2020 GHG inventory for Kern County in May 2012. The forecasted total county GHG emissions for 2020 are 27,272,709 MT CO₂e (not including the subtraction of sequestering sectors). The project GHG emissions are 0.16% of the 2020 total emissions projected for Kern County.

While the project results in a change to the existing environment by increasing existing GHG emission levels, as described above, a “bright line” significance threshold for emissions is not applicable to the project. No agency with regulatory authority and expertise, such as the CARB or the SJVAPCD, has adopted numeric GHG thresholds for land use development projects for purposes of CEQA. As such, this numeric increase – on its own – does not indicate that the project’s GHG emissions would significantly impact the environment. Therefore, the increase is considered qualitatively, as discussed below.

The project GHG emissions inventory is likely conservatively high as waste would have to be transported to different disposal facilities in the absence of this project. Ninety eight percent of the project GHG emissions are caused by increased waste hauling truck activity and landfill gas emissions. In the absence of the project, additional waste anticipated to be accepted from the Facility’s current customers would be sent to and treated at another Class I or II Facility. Accordingly, some emissions that would no longer be associated with Facility operations would simply take place at another Class I or Class II Facility. According to Facility personnel, the Facility’s current customer base is generally from Southern California, the Bay Area, the San Joaquin Valley, and the Central Coast. The nearest alternative Class I and Class II facilities include the McKittrick Waste Landfill and Kettleman Hills Hazardous Waste Landfill, which are approximately 8 miles and 45 miles from the Facility.

TABLE 4.8-3: SUMMARY OF BASELINE AND PROJECT GHG EMISSIONS (MT CO₂E/YR)

Emissions Category	Baseline GHG Emissions¹	Project GHG Emissions¹
Area Sources ²	0	0

TABLE 4.8-3: SUMMARY OF BASELINE AND PROJECT GHG EMISSIONS (MT CO₂E/YR)

Emissions Category	Baseline GHG Emissions¹	Project GHG Emissions¹
Electricity Usage ³	168	262
Water ⁴	4	4
Waste Disposed ⁵	11	72
Traffic ⁶	7,573	17,765
Stationary ⁷	3	0
Off-Road ⁸	1,226	131
Landfill Gas ⁹	27,347	24,170
<i>Operational Subtotal</i>	36,332	42,404
Construction Amortized ¹⁰	0	221
Total	36,332	42,625
SF ₆ Tracer Testing ¹¹	—	—

Source: Appendix G.

Notes:

- ¹ Emissions are presented as CO₂e, which includes CO₂, CH₄, and N₂O emissions, weighted by their respective global warming potentials.
- ² No emissions from area sources were quantified as no landscaping is anticipated to take place on site.
- ³ Emissions from electricity are shown in Appendix G Table 4-4.
- ⁴ Emissions from water distribution and treatment are shown in Appendix G Table 4-3.
- ⁵ Emissions from waste disposal are calculated using CalEEMod and are presented in Appendix G Table 4-5. These emissions represent municipal solid waste generated from on-site buildings, not industrial landfilled waste processed by the Facility.
- ⁶ Emissions from mobile trips are calculated in Appendix G Table 4-2.
- ⁷ Emissions from stationary sources include the operation of the permitted emergency generator and fire pump and are provided in Appendix G Table 4-8.
- ⁸ Emissions from off-road equipment are calculated in Appendix G Table 4-7.
- ⁹ Emissions from landfill gas are calculated in Appendix G Table 4-6. Landfill gas emissions are calculated as a function of the amount of waste landfilled each year.
- ¹⁰ One-time emissions from construction were amortized over a 16-year period based on projected WMU lifetime. See Appendix G Table 4-1i.
- ¹¹ Due to regulatory requirements, SF₆ is no longer used after the baseline year as a tracer gas during landfill cell testing. It is listed here for disclosure purposes but has not been included in emission totals.

The greenhouse gas emissions from waste degradation would continue to be generated regardless of the location that the waste is disposed at. The CH₄ and CO₂ emissions from on-site non-hazardous (industrial) waste landfill cells are based on the quantity of non-hazardous waste disposed and waste properties (e.g., degradable organic carbon content). If the waste was no longer treated at the Facility, it would be sent to another Facility where similar decomposition and generation of GHG emissions would occur.

There are no applicable SJVAPCD Best Performance Standards for this project. The Best Performance Standards have been established for specific classes and categories where the most effective, District approved, Achieved-In-Practice means of reducing or limiting GHG emissions from a GHG emissions sources, that is also economically

feasible, is determined to be the Best Performance Standards. The Best Performance Standards were reviewed to assess whether the project has any sources for which the standards apply, and none of the Best Performance Standards currently approved by the District are applicable to the project.

Therefore, impacts related to generations of GHG are considered less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.8-2: The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas.

Kern County has not adopted a GHG reduction plan.

Kern Council of Governments (Kern COG)

Kern COG's 2018 Regional Transportation Plan/Sustainable Communities Strategy (the current RTP/SCS for the region) contains seven goals:

1. Mobility – Improve the mobility of people and freight;
2. Accessibility – Improve accessibility to major employment and other regional activity centers;
3. Reliability – Improve the reliability and safety of the transportation system;
4. Efficiency – Maximize the efficiency of the existing and future transportation system;
5. Livability – Promote liveable communities;
6. Sustainability – Minimize effects on the environment; and
7. Equity – Ensure an equitable distribution of the benefits among various demographic and user groups.

The RTP is based on an analysis that considers the entire County, and includes all projects involving changes in regional growth and land use in Kern County, as well as the countywide vehicle traffic projections. Cumulative GHG emissions analyzed in the RTP were compared to regional GHG thresholds and analyzed under statewide plans and regulations. This analysis concluded that the projected increase in GHG emissions from existing conditions to 2042 would primarily be due to changes in regional growth/land use; however, the RTP achieves GHG emissions reduction targets from mobile sources from 2005 levels by implementing a mix of land use strategies, transportation management, economic factors, and road projects.

The project, which concerns changes to a Facility that has existed well before the 2018 adoption of the RTP, is consistent with the land use and transportation management strategies and assumptions set forth in the RTP. Accordingly, pursuant to the consistency with Kern COG's RTP/SCS for the region, the project would be considered consistent with Kern COG's RTP/SCS for the region, and the project's GHG emissions would be considered less than significant on the project level. Per the Transportation Impact

Study for the Project prepared by GTC, with traffic growth developed using the Kern COG Regional Travel Demand Forecast Model, the project would generate minimal new passenger vehicle trips resulting from an increase in employees or service vehicle trips. It would fall below the threshold of 110 net new passenger vehicle trips per day and have a less-than-significant traffic impact.

Statewide Emissions Reduction Targets

The 2017 Scoping Plan describes two paths to achieving the 2050 target. The first path would be one in which consistent progress is made between 2020 and 2050, the 2030 target is achieved, and progress leads to achievement of the 2050 target earlier. The other path is one that begins with the 2030 target and then progresses towards the 2050 target of 80% below 1990 levels. A recent study shows that the existing and proposed regulatory framework will allow the State to reduce GHG emissions to 40 percent below 1990 levels by 2030, and to 60 percent below 1990 by 2050. Even though this study did not provide a regulatory and technology roadmap to achieve the 2050 target, it demonstrated that various combinations of policies could allow statewide emissions to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the study could allow the State to meet the 2050 target.

Statewide efforts are underway to facilitate the State's achievement of its 2050 target and it is reasonable to expect the project's emissions to decline as the regulatory initiatives identified by CARB in its Scoping Plan are implemented, new regulatory programs or incentives are implemented to reduce GHG emissions, and other technological innovations occur. Many of these initiatives include reducing the carbon content of motor fuels and fuels for electricity generation. Reducing the carbon content of motor fuels and fuels for electricity generation will reduce CO_{2e} emissions from this project over time.

For example, CARB's 2014 First Update "lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050." Many of the emission reduction strategies recommended by CARB would serve to reduce the project's post-build out emissions level to the extent applicable by law:

- **Energy Sector:** Continued improvements in California's appliance and building energy efficiency programs and initiatives would serve to reduce the project's emissions level. Additionally, further additions to California's renewable resource portfolio would favorably influence the project's emissions level.
- **Transportation Sector:** Anticipated deployment of improved vehicle efficiency, zero emission technologies, lower carbon fuels, and improvement of existing transportation systems all will serve to reduce the project's emissions level.
- **Water Sector:** The project's emissions level will be reduced as a result of further desired enhancements to water conservation technologies.
- **Waste Management Sector:** Plans to further improve recycling, reuse and reduction of solid waste will beneficially reduce the Project's emissions level.

The project's emissions are largely covered by the California's Cap-and-Trade program, and thus the State's efforts will also continue to reduce the project's emissions through this mechanism. Forty three percent of the Project's GHG emissions are related to sectors that are covered by the California Cap-and-Trade program (e.g., GHGs due to electricity usage, on-road mobile and off-road mobile equipment fuel consumption). Emissions from major GHG-emitting sources, such as electricity generation, fuel distributors (e.g., natural gas and propane fuel providers and transportation fuel providers), and large stationary sources are capped under the rules of the Cap-and-Trade program, and the majority of policy proposals developed

by CARB and other State agencies pursuing GHG emissions-reducing strategies are designed to secure reductions from these sectors well into the future. If the project emissions associated with these sectors are excluded, the only significant category that remains is related to landfill gas (see Appendix G). As discussed in Section 5.1, these landfill gas emissions are likely to exist even in the absence of the project as this project treats waste that is generated by other sources and other landfills will operate similarly to the project.

The project will be consistent with the state's GHG reduction goals. The project will serve the needs of other industries in California and provide an effective and efficient means to dispose of that waste. The project's emissions sources are regulated (and are foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives and the project will continue to meet those regulations to continually improve and reduce GHG emissions. Clean Harbors has a focus on sustainability, with specific measures being implemented to manage energy use across its facilities. Clean Harbors has partnered with Schneider Electric to implement its EcoStruxure™ Resource Advisor application, which collects and aggregates cross-enterprise information and sustainability metrics. To help support electricity management efforts, as part of the Facility Energy Conservation Program, the Facility conducts ongoing reporting and receives reduction recommendations. Water consumption will also be managed using the Resource Advisor. Solar energy is continuing to be evaluated as a viable option for Clean Harbors facilities. Continuous improvement is ongoing to manage the energy use of the transportation fleet. The following initiatives have been applied across the entire corporate fleet:

- Routine use of rail transportation to offset the need to transport customer waste materials by truck;
- Implementation of alternative fuel vehicles (such as compressed natural gas and liquid natural gas);
- An aggressive Equipment Lifecycle Management Program in which high-mileage tractor units are proactively replaced with new tractors;
- Installation of computerized auto-idler systems on the over-the-road transportation vehicles to prevent idling for more than five minutes; and
- Installation of Teologis® electronic logging device vehicle performance programs that track engine and vehicle efficiencies and measure many statistics, including fuel efficiency and idle time.
- Clean Harbors also has waste-processing initiatives to incorporate reuse of incoming waste streams, recycled products, or manufacturing byproducts to offset the need for new materials. Examples include:
 - Residual paper in the solidification process of wastewater sludge;
 - Waste caustics and waste acids from various manufacturing operations as a substitute in wastewater neutralization processes;
 - Regenerated spent carbon in air stripping and wastewater treatment processes;
 - Byproducts from mining activities, such as ferrous-sulfate dust, as stabilization media for Company landfills; and
 - Cement kiln dust, fly-ash and waste Portland cement as substitute stabilization media.

Kern County Climate Adaptation Plan

Kern County does not have a “qualified” GHG reduction plan (meaning a plan that contains quantifiable objectives, has been subject to environmental review, and can be relied upon in a subsequent CEQA analysis). The County has adopted a climate adaptation plan that includes various recommendations,

including 1) an increased usage of zero or near-zero emission and fuel-efficient vehicles—including vehicles that use cleaner diesel fuel and biofuels, 2) improved energy supply and distribution efficiency and shift toward renewable heat and power sources like solar, and 3) an effective, solid waste management plan to reduce source generation and to divert waste from landfills to achieve emission reductions.

As described above, the project applicant utilizes alternative fuel and high efficiency transportation in its operations where possible. The proposed project is consistent with County plans for solid waste management and would not interfere with diversion, including recycling and composting.

Conclusion

The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Emissions of GHGs and their contribution to global climate change are considered to be inherently cumulative (see CEQA Guidelines Section 15064.4). Therefore, the cumulative analysis is incorporated into Impact 4.8-1 and 4.8-2.

The project's emissions at buildout are reasonably anticipated to decline due to continued regulatory and technological advancements and a company focus on sustainability. Thus, the project would not conflict with the statewide emissions reduction targets for 2020, 2030 and 2050 as described above.

While the project would represent an increase in GHG emissions when compared to the existing conditions on the site, the project would not conflict with the Kern COG's RTP/SCS or statewide emission reduction targets. Therefore, the project's GHG emissions will be less than significant in the context of Threshold 1 and Threshold 2, as discussed in Section 3.3.

Further, the SJVAPCD's GAMAQI observes that: "It is widely recognized that no single project could generate sufficient GHG emissions to noticeably change global climate temperature. However, the combination of GHG emissions from past, present and future projects could contribute substantially to global climate change. Thus, project specific GHG emissions should be evaluated in terms of whether or not they would result in a cumulatively significant impact on global climate change." In this context, and based on the analysis above, the project is not cumulatively considerable.

Mitigation Measures

No mitigation measures required.

Level of Significance

Cumulative impacts would be less than significant.

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Section 4.9

Hazards and Hazardous Materials

4.9.1 Introduction

This section of the EIR describes the affected environment and regulatory setting for hazards and hazardous materials in the study area. It also describes the project's potential impacts on residences and other sensitive receptors that could be exposed to these hazards (other than geologic hazards; see Section 4.7, *Geology and Soils*, of this EIR for discussion on geologic hazards) and presents mitigation measures where applicable. Information in this section is based primarily on the *Phase I Environmental Site Assessment (ESA)* (Appendix H) and the *Health Risk Assessment Technical Report* (Appendix C).

The Kern County Public Health Services Department provided a scoping comment letter noting the potential permitting requirements for the proposed project. The Department of Toxic Substances Control (DTSC) provided a scoping comment letter identifying themselves as a responsible agency under CEQA, with jurisdiction over the Hazardous Waste Facility Permit Renewal Application. All scoping comments are provided in Appendix A.

4.9.2 Environmental Setting

This section discusses the existing conditions related to hazards and hazardous materials in the project area and describes the environmental setting for hazardous materials and waste, airports, noise (also addressed in Section 4.13, *Noise*, of this EIR), wildfires (also addressed in Section 4.18, *Wildfire*, of this EIR). Residences and other sensitive receptors such as schools are also described as their proximate location to the project site affects their exposure to the potential hazards described below. A description of the project site relative to hazards and hazardous materials can also be found below.

Existing Setting

The project site consists of an approximately 320-acre site, on which the existing landfill is located, and the easterly 320-acre expansion parcel. The existing site is developed with multiple modular trailers that serve as administrative offices, breakroom, showers/locker room, laboratories, and conference room, a 2,000 square foot maintenance shop building, a 10,000 square foot Stabilization Treatment Unit (STU) cover, a 1,600 square foot lab/treatment building, and a 1,000 square foot water treatment building. The remainder of the site is primarily occupied by 15 Waste Management Units (WMUs).

A gravel parking lot is located in the southeast portion of the site, immediately east of the entrance road. Most of the site is unpaved, with gravel covered roadways and stabilized closed-in-place landfills. There is one centrally located pond used for freshwater storage and two storm water sedimentation sinks located on the eastern site boundary. Additionally, there is a plugged oil and gas well, east of the existing Facility, within the area of the proposed expansion boundaries.

The expansion site is currently vacant, consisting of shrubland and grassland.

Surrounding Uses

Uses surrounding the project site generally consist of agricultural and undeveloped land. Buttonwillow Union Elementary School is located approximately 3 miles northeast of the project site and McKittrick Elementary School is located over six miles south of the site. The project site is located approximately 8 miles northwest of the nearest airport, the Elk Hills-Buttonwillow airport. The project site is not located within the sphere of influence (SOI) of any airport identified in the Kern Airport Land Use Compatibility Plan.

Historical Property Use

A Phase I Environmental Site Assessment (Phase I ESA) was prepared for the project in 2019. A summary of the past site uses prepared under the Phase I ESA indicated that the site appeared to be undeveloped desert land until 1983 when Petroleum Waste, Inc. developed the site as a waste disposal Facility for non-hazardous and hazardous wastes. Upon its opening in 1983, the Facility was fully permitted to manage Resource Conservation and Recovery Act (RCRA) hazardous wastes, California hazardous waste, and non-hazardous waste for stabilization treatment, solidification, and disposal. At that time, waste primarily included petroleum-contaminated wastes associated with exploration, extraction, production, refinement, marketing, and/or transportation of crude oil, natural gas, petroleum-derived fuels, and lubricants. A Conditional Use Permit (CUP) was issued by Kern County in 1982. In 1983 and 1984, the California Department of Health Services and the United States Environmental Protection Agency (USEPA) respectively issued Hazardous Waste Facility permits to the site. These permits allowed the Facility to construct and operate both California hazardous waste and RCRA hazardous waste surface impoundments.

Over the years, various new Waste Management Units (WMUs) and waste treatment applications/mechanisms were introduced to serve the site and accommodate hazardous waste disposal. All hazardous waste impoundments within the site underwent clean closure between 1993 and 1997 and WMU 35 was constructed in the former location of several previous surface impoundments. In 1998, the Facility's name was changed to Safety-Kleen (Buttonwillow), Inc., and in 2002 Clean Harbors Buttonwillow, LLC became the owner of the Facility and has since served as the operator (Appendix H).

Hazardous Materials and Waste

A hazardous material is any substance that, because of its quantity, concentration, physical or chemical properties, may pose a hazard to human health and the environment. Under Title 22 of the California Code of Regulations (CCR), the term "hazardous substance" refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: (1) toxicity; (2) ignitability; (3) corrosiveness; and (4) reactivity (22 CCR 11, Article 3).

A hazardous material is defined as a substance or combination of substances which, because of its quantity, concentration, 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 (22 CCR 66260.10).

Various forms of hazardous materials 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.

As described in Chapter 3, *Project Description*, the Clean Harbors Buttonwillow Facility is a commercial waste management Facility that is permitted to accept, treat, store, transfer, and dispose both nonhazardous and hazardous wastes that are not land-banned. As such, hazardous materials and conditions are present within the project site.

A reconnaissance-level survey was completed in January 2018 as part of the Phase I ESA prepared for the project. The survey covered the existing Facility site and did not include the proposed expansion boundaries. Observations were documented of building interiors and exterior portions of the site to determine and evaluate the presence of any possible recognized environmental conditions (RECs). Observations within the site included the following:

- Current and past use of the site,
- Hazardous substances and petroleum products,
- Former and current underground storage tanks (USTs) and aboveground storage tanks (ASTs),
- Pools of liquid, standing surface water, or sumps,
- Drums of hazardous substances or petroleum products,
- Electrical and hydraulic equipment,
- Heating and cooling systems,
- Pits, ponds, or lagoons,
- On-site solid waste disposal,
- Wastewater or other liquid (including stormwater),
- Wells (including dry wells, irrigation wells, abandoned wells, etc.), and
- Septic systems or cesspools

Further information related to these potential RECs are described in the discussions below.

Hazardous Substances and Petroleum Products

Several dedicated drum and storage areas are located within the existing site. Waste drums are stored within segregated and contained in a drum storage handling area (DSHA) of the STU. Drums and mobile ASTs of automotive fluids (e.g., motor oils, hydraulic oil, waste oil, antifreeze, grease) are stored at the maintenance shop for vehicle servicing. Approximately, 20, five-gallon containers of oil, and three flammable chemical storage cabinets containing aerosol cans of lubricants, brake cleaner, paints, automatic transmission fluids, coolants, oil treatment, red dyed kerosene, gasoline containers, foam, adhesives, and laboratory chemicals were also observed onsite.

Underground and Aboveground Storage Tanks

Two active USTs are present within the existing site and contain lab rinsate water (i.e., water containing low concentrations of contaminants). These active tanks do not contain any hazardous materials and are

located in a concrete vault that contains a sump for collecting storm water, which is subsequently pumped out and discharged to WMU 31.

Approximately 25 ASTs are located within the site. Contents of the ASTs consist of gasoline, diesel, used oil, dirty water, liquid additives, fly ash and kiln dust, sludge, leachate, propane, diesel fuel, and potable water (Appendix H).

Wells

The Facility includes one process water supply well located on the western portion of the existing Facility. Previously, the Facility had additional water supply wells located off-site. Both wells have since been closed and capped. There are no groundwater supply wells located within the vicinity of the existing Facility; however, the Facility's groundwater monitoring network consists of five interface wells, 30 upper perched zone wells, seven intermediate perched zone wells, and 31 lower water table wells, four of which are located in the proposed expansion site boundaries. There is a plugged oil and gas well, within the area of the proposed Facility expansion, located on APN 099-261-32 (CalGEM 2022). One idle oil and gas well, as well as four plugged oil and gas wells, are located within one mile of the site. As described in the Phase I ESA, existing and capped wells do not indicate any evidence of release.

Polychlorinated Biphenyls

Two pole-mounted and three pad-mounted transformers owned by Pacific Gas & Electric (PG&E) are present on the site; however, were not observed to contain leaks or hazardous releases. The site reconnaissance survey in 2018 did not identify any known polychlorinated biphenyls (PCBs) within the project site, including within built structures (Appendix H).

Pits, Ponds, and Lagoons

There is one pond located central to the project site. Water from the pond is supplied by the Facility's water supply well and is used for dust suppression and fire water storage (Appendix H).

Solid Waste Disposal Areas or Areas Filled by Non-Natural Causes

The Facility began its operation as a landfill in 1983. Site review under the reconnaissance survey did not reveal any areas of the site that included evidence of waste disposal not already designated a WMU (Appendix H).

Controlled Recognized Environmental Conditions (RECs)

WMUS 18, 21, 22, 23, 27, 28, 33, as well as Cells 1 through 4 of WMU 35 have been closed-in-place at the project site. Site observations did not yield any indication of release and the Facility has ongoing monitoring requirements that include quarterly groundwater monitoring, waste volume monitoring, leachate collection and removal system (LCRS) monitoring, analysis of leachate, confirming functionality of landfills and surface impoundment LCRSs, and vadose zone monitoring.

As part of a 1984 Covenant and Agreement between Petroleum Waste, Inc. and DTSC, usage of the site is restricted. Specifically, portions of the site are restricted to non-hazardous waste disposal while other

portions are restricted to hazardous waste disposal. The site is also restricted from agricultural, residential, hospital or other medical care, daycare, or school use. Additionally, restrictions are in place upon closure of the Facility and include no building, filling, grading, excavating, drilling, or mining without prior approval by DTSC. Operation of the site with the aforementioned uses or uses that would disturb the integrity of the final cover, liner(s), or any other components of the containment system is permitted. As indicated in the Phase I ESA, no contamination has been detected that would be indicative of a release from the landfills and given the closed-in-place landfills, the site is considered to represent a controlled REC (CREC) (Appendix H).

Health Risk Assessment

A Health Risk Assessment (HRA) (Appendix C) was prepared in February 2021 to evaluate the project's impacts on health risks resulting from project construction in operation. Specifically, the HRA evaluates the potential excess lifetime cancer risk, non-cancer chronic and acute hazards for the residential and worker populations that may be exposed to Toxic Air Contaminants (TACs) and diesel particulate matter (DPM) emitted during operation of the proposed project as well as during construction. For further discussion related to the project's potential to result in air quality impacts, refer to EIR Section 4.3, "Air Quality."

Identification of Chemicals of Potential Concern

The HRA identified chemicals of potential concern (COPCs) based on TACs expected to be emitted during construction and operation of the project. A total of 29 chemicals were identified and include seven volatile organic compounds (VOCs), two polycyclic aromatic hydrocarbon (PAH) compounds, polychlorinated biphenyls, two pesticides/herbicides, ethylene glycol, 11 metals, three inorganic gases, asbestos, and DPM (Appendix C).

Sensitive Receptors and Exposure

Sensitive receptors within the project area are limited. Clean Harbors owns about 320 acres of undeveloped land to the east (the proposed expansion site) and west of the existing Facility while the area north of the Facility is used for agricultural uses and contains pistachio trees. The area south of the Facility is owned by Chevron USA and is undeveloped. As such, no residential or business structures are regularly present within the vicinity of the project site and seasonal orchard workers north of the site are present for a limited time (i.e., 30 days during harvest season). McKittrick, the nearest populated area to the Facility is located 6.5 miles south, while Buttonwillow is approximately seven miles east. The nearest residence is approximately three miles northeast of the Facility.

Inhalation is considered the primary pathway of exposure from emissions at the Facility for off-site receptors. Exposures of multi-pathway chemicals, described above, could also occur via non-inhalation pathways including ingestion and dermal contact with soil and dust settling resulting from project operational activities as well as ingestion of homegrown produce grown in affected soils. For the purposes of the HRA evaluation, residents are assumed to be exposed 24 hours per day, 350 days per year, for a total of 26 years. Commercial and industrial workers are assumed to be exposed 8 hours per day, 250 days per year, for a total of 25 years (Appendix C).

The “Risk Characterization” discussion of the HRA identifies the cancer risk, chronic hazard index (HI), and acute HI results for the project. Findings indicated the following:

- The estimated cancer risks for a maximum exposed individual (MEI) during implementation of the project ranges from 0.0056 in one million to 0.21 in one million (operation), and 0.0011 in one million to 0.0082 in one million (construction). The total cancer risk for combined project construction and operation is 0.02 in one million (residents of Buttonwillow), 0.008 in one million (residents of McKittrick), 0.2 in one million (MEI resident), and 0.1 in one million (MEI worker). This data represents a risk potential well below the San Joaquin Air Pollution Control District (SJAPCD) threshold of 20 in one million.
- The estimated chronic HI for MEIs during implementation of the project ranges from 0.0010 to 0.046 (operation) and 0.000034 to 0.00026 (construction). The total HI for combined project construction and operation is 0.003 (residents of Buttonwillow), 0.001 (residents of McKittrick), 0.04 (MEI resident), and 0.05 (MEI worker), which is below the SJAPCD threshold of 1.0 for chronic HI.
- The total acute HI at the point of maximum impact was determined to be 0.4, which is below the SJAPCD threshold of 1.0. Hazard quotient results indicate that ammonia and nickel were determined as the primary drivers for acute HI.

As determined by the HRA, health impacts for resident or worker pollutions in the vicinity of the Facility, due to potential exposure to emissions resulting from project construction and operation activities, are well below the SJAPCD thresholds of significance (Appendix C).

Fire Hazard Areas

The California Department of Forestry and Fire Prevention requires counties within the state to develop fire protection management plans that address potential threats of wildland fires. The Kern County Wildland Fire Management Plan identifies federal, state, and local responsibility areas for the entire County to facilitate coordination efforts for fire protection services. The project site is within the Local Responsibility Area (LRA) and is not identified by the California Department of Forestry and Fire Protection (CAL FIRE) as having moderate, high, or very high fire risk. However, the project site is located directly north of State Responsibility Area (SRA) designated as having moderate fire risk (CAL FIRE 2022a).

4.9.3 Regulatory Setting

Federal

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (USEPA) was established in 1970 to consolidate in one agency a variety of federal research, monitoring, standard-setting, and enforcement activities to ensure environmental protection. The USEPA’s mission is to protect human health and to safeguard the natural environment—air, water, and land—upon which life depends. The USEPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the

responsibility for using permits and for monitoring and enforcing compliance. Where national standards are not met, the USEPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the USEPA to regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the “cradle-to-grave” system of regulating hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act

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

Clean Water Act/Spill Prevention, Control, and Countermeasure Rule

The Clean Water Act (CWA) (33 USC 1251 et seq., formerly known as the Federal Water Pollution Control Act of 1972) was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of waters of the United States. As part of the CWA, the USEPA oversees and enforces the Oil Pollution Prevention regulation contained in 40 CFR 112, which is often referred to as the “SPCC rule” because the regulations describe the requirements for facilities to prepare, amend, and implement spill prevention, control, and countermeasure (SPCC) plans. A Facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total aboveground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the Facility could reasonably be expected to discharge oil into or upon the “navigable waters” of the United States.

Other Regulations

Other federal regulations overseen by the USEPA relevant to hazardous materials and environmental contamination include 40 CFR Parts 100 to 149 – Water Programs, 40 CFR Parts 239 to 259 – Solid Wastes,

and 40 CFR Parts 260 to 279 – Hazardous Waste. These regulations designate hazardous substances under the CWA; determine the reportable quantity for each substance that is designated as hazardous; and establish quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration's (OSHA's) mission is to ensure the safety and health of U.S. workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA staff establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910.

State

Hazardous Materials Release Response Plans and Inventory Act of 1985

The Hazardous Materials Release Response Plans and Inventory Act, also known as the Hazardous Materials 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 created the state hazardous waste management program, which is similar to but more stringent than the federal RCRA program. The hazardous waste control program is administered by California Department of Toxic Substances Control (DTSC) and local Certified Unified Program Agencies (CUPAs). Within CalEPA, DTSC is primarily responsible for regulating the generation, transport, and disposal of hazardous substances under the authority of the Hazardous Waste Control Act; enforcement is delegated to local jurisdictions. The act is implemented by regulations contained in Division 4.5 of Title 22 CCR, which describes the following required aspects for the proper management of hazardous waste:

- Identification and classification
- Generation and transportation
- Design and permitting of recycling, treatment, storage, and disposal facilities
- Treatment standards
- Operation of facilities and staff training
- Closure of facilities and liability requirements

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and Title 22, 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 California Department of Toxic Substances and Control (DTSC).

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

Senate Bill 1082 (1993) created the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), which requires the administrative consolidation of six hazardous materials and waste programs (Program Elements) under one agency, a Certified Unified Program Agency (CUPA). The Program Elements consolidated under the Unified Program are as follows:

- Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs (i.e., Tiered Permitting)
- Aboveground Petroleum Storage Tank Program
- Hazardous Materials Release Response Plans and Inventory Program (i.e., Hazardous Materials Disclosure or “Community-Right-To-Know”)
- California Accidental Release Prevention Program (Cal ARP)
- Underground Storage Tank (UST) Program
- Uniform Fire Code Plans and Inventory Requirements

The Unified Program is intended to provide relief to businesses in complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs. The Unified Program is implemented at the local government level by CUPAs. Most CUPAs have been established as a function of a local environmental health or fire department. Some CUPAs have contractual agreements with another local agency, a participating agency, which implements one or more Program Elements in coordination with the CUPA.

California Environmental Protection Agency

The California Environmental Protection Agency (Cal/EPA) was created in 1991 and unified California’s environmental authority in a single cabinet-level agency and brought the California Air Resources Board, State Water Resource Control Board (SWRCB), Regional Water Quality Control Board, CalRecycle, DTSC, Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation under one agency. These agencies were placed within the Cal/EPA “umbrella” for the protection of human health and the environment and to ensure the coordinated deployment of state resources. Their mission is to restore, protect, and enhance the environment and to ensure public health, environmental quality, and economic vitality.

Department of Toxic Substances and Control

DTSC, a department of Cal/EPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22,

Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

California Government Code Section 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, U.S. Department of Health Services lists of contaminated drinking water wells, sites listed by the SWRCB as having UST leaks or a discharge of hazardous wastes or materials into the water or groundwater and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

California Office of Emergency Services

To protect 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. The OES requires that basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and health risks) be available to firefighters, public safety officers, and regulatory agencies. Typically, this information should be included in business plans to prevent or mitigate damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment. These regulations are covered under Chapter 6.95 of the California Health and Safety Code, Article 1 – Hazardous Materials Release Response and Inventory Program (Sections 25500 to 25520) and Article 2 – Hazardous Materials Management (Sections 25531 to 25543.3).

Title 19 CCR, Public Safety, Division 2, Office of Emergency Services, Chapter 4 – Hazardous Material Release Reporting, Inventory, and Response Plans, Article 4 (Minimum Standards for Business Plans) establishes minimum statewide standards for hazardous materials business plans. These plans must include the following: (1) a hazardous material inventory in accordance with Sections 2729.2 to 2729.7, (2) emergency response plans and procedures in accordance with Section 2731, and (3) training program information in accordance with Section 2732. Hazardous materials business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state. Each business will prepare a hazardous materials business plan if that business uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to the following:

- 500 pounds of a solid substance,
- 55 gallons of a liquid,
- 200 cubic feet of compressed gas,
- A hazardous compressed gas in any amount, or
- Hazardous waste in any quantity

California Occupational Safety and Health Administration

The 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 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

California Highway Patrol

The transportation of hazardous materials within the State of California is subject to various federal, state, and local regulations. It is illegal to transport explosives or inhalation hazards on any public highway that is not designated for that purpose, unless the use of a highway is required to permit delivery or the loading of such materials (California Vehicle Code, Sections 31602 (b) and 32104(a)). The California Highway Patrol (CHP) designates through routes to be used for the transportation of hazardous materials.

A valid Hazardous Materials Transportation License, issued by the CHP, is required by the laws and regulations of State of California Vehicle Code Section 3200.5 for transportation of either:

- Hazardous materials shipments for which the display of placards is required by state regulations, and
- Hazardous materials shipments of more than 500 pounds, which would require placards if shipping greater amounts in the same manner.

Additional requirements on the transportation of explosives, inhalation hazards, and radioactive materials are enforced by the CHP under the authority of the State Vehicle Code. Transportation of explosives generally requires consistency with additional rules and regulations for routing, safe stopping distances, and inspection stops (14 CCR 6 [1] [1150–1152.10]). Inhalation hazards face similar, more restrictive rules and regulations (13 CCR 6 [2.5] [1157–1157.8]). Transportation of radioactive materials is restricted to specific safe routes.

CalRecycle Landfill Controls and Standards

At the State level, the management of solid waste is governed by the regulations established by the California Department of Resources, Recycling and Recovery (CalRecycle), which delegates local permitting, enforcement, and inspection responsibilities to the Local Enforcement Agency (LEA). The Kern County Solid Waste Program is the LEA for CalRecycle in Kern County. This division aims to safeguard public health and protect the environment.

In 1997, some of the regulations pertaining to landfills adopted by the State Water Resources Control Board (SWRCB) (23 CCR Chapter 15) were incorporated with the CalRecycle (formerly the California Integrated Waste Management Board [CIWMB]) regulations (Title 14) to form CCR Title 27. Thus, CCR Title 27 now contains coordinated regulations of the SWRCB and CIWMB pertaining to the disposal of waste on land. Minimum standards for solid waste handling and disposal are established in 27 CCR Division 2, Chapter 3. Articles 4 and 6 contain landfill disposal site controls that relate to public health and safety:

- **Section 20680. CIWMB – Daily Cover.** The owners or operators of solid waste landfill units shall cover disposed solid waste.
- **Section 20760. CIWMB – Nuisance Control.** Each disposal site shall be operated and maintained so as not to create a public nuisance.
- **Section 20770. CIWMB – Animal Feeding.** Feeding of solid waste to animals which will be used for human consumption is prohibited on disposal sites. Grazing of livestock away from operating areas is permitted.
- **Section 20790 CIWMB – Leachate Control.** The operator shall ensure that leachate is controlled to prevent contact with the public.

- **Section 20800. CIWMB – Dust Control.** The operator shall take adequate measures to minimize the creation of dust and prevent safety hazards due to obscured visibility.
- **Section 20810. CIWMB – Vector and Bird Control.** The operator shall take adequate steps to control or prevent the propagation, harborage or attraction of flies, rodents, or other vectors and to minimize bird problems.
- **Section 20919. CIWMB – Gas Control.** Where the EA [enforcement agency], the local fire control authority, the local building authority, or the CIWMB has sufficient relevant information to believe a hazard or nuisance is being or may be created by landfill gas, it shall so notify the operator. The local fire control authority and the local building authority shall also notify the EA and the CIWMB. Thereafter, as directed by the EA, the local fire control authority, the local building authority, or the CIWMB, the site operator shall cause the site to be monitored for presence and movement of landfill gas and shall take necessary action to control such gas. The monitoring program shall be developed pursuant to the specifications of the above agencies. The monitoring program shall not be discontinued until authorized to do so in writing by the requiring agency. Results of the monitoring shall be submitted to the appropriate agencies. If monitoring indicates landfill gas movement away from the site, the operator shall, within a period of time specified by the requiring agency, construct a gas control system approved by that agency. The agency may waive this requirement if satisfactory evidence is presented demonstrating that adjacent properties are safe from hazard or nuisance caused by landfill gas movement. The operator shall duly inform the EA of possible landfill gas problems.

California Fire Code

The 2019 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against the hazards of fires, explosions, and dangerous conditions in new and existing buildings, structures, and premises. The California Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the California Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of buildings and structures throughout California. The California 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 areas.

California Department of Forestry and Fire Protection (CAL FIRE)

Under Title 14 of the California Code of Regulations (CCR), CAL FIRE has the primary responsibility for implementing wildfire planning and protection for SRAs. CAL FIRE develops regulations and issues fire-safe clearances for land within a fire district of the SRA. More than 31 million acres of California's privately owned wildlands are under CAL FIRE's jurisdiction (CAL FIRE 2022a).

CAL FIRE adopted Fire Hazard Severity Zone maps for the SRAs in November 2007. Fire hazard is a way to measure physical fire behavior so that people can predict the damage a fire is likely to cause. Fire hazard measurement includes the speed at which a wildfire moves, the amount of heat the fire produces, and the burning fire brands that the fire sends ahead of the flaming front.

In addition to wildland fires, CAL FIRE’s planning efforts involve responding to other types of emergencies, including medical aid, hazardous material spills, swift-water rescues, search and rescue missions, civil disturbances, train wrecks, floods, and earthquakes. Through contracts with local governments, CAL FIRE provides emergency services in 36 of California’s 58 counties (CAL FIRE 2022a). As described above, the project site is located in the LRA and is not within a very high fire hazard severity zone. However, the area directly south of the project site is within the SRA and is designated as a moderate fire hazard severity zone.

Local

Construction and operation of the project would be subject to policies and regulations contained within the general and specific plans, including the Kern County General Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies pertaining to the avoidance of hazards and adverse effects related to hazardous materials. The policies, goals, and implementation measures in the Kern County General Plan related to hazards and hazardous materials that are applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but as stated in Chapter 2, Introduction, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Kern County General Plan

Chapter 2. Circulation Element

2.5.4 Transportation of Hazardous Materials

Goal

Goal 1: Reduce risk to public health from transportation of hazardous materials.

Policies

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

Implementation Measure

Measure A: Roads and highways utilized for commercial shipping of hazardous waste destined for disposal will be designated as such pursuant to Vehicle Code Sections 31303 et seq. Permit applications shall identify commercial shipping routes they propose to utilize for particular waste streams.

Chapter 4. Safety Element

4.2 General Policies and Implementation Measures, Which Apply to More Than One Safety Constraint

Implementation Measure

Measure F: The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by the Federal Emergency Management Agency (FEMA), shall be used as a source document for preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA), evaluation of project proposals, formulation of potential mitigation, and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.

4.9 Hazardous Materials

Implementation Measure

Measure A: Facilities used to manufacture, store, and use of hazardous materials shall comply with the Uniform Fire Code, with requirements for siting or design to prevent onsite hazards from affecting surrounding communities in the event of inundation.

Kern County Wildland Fire Management Plan

The Kern County Wildland Fire Management Plan documents the assessment of wildland fire situations throughout the State Responsibility Areas within the county. The Kern County Fire Department Wildland Fire Management Plan provides for systematically assessing the existing levels of wildland protection services and identifying high-risk and high-value areas that are potential locations for costly and damaging wildfires. The goal of the plan is to reduce costs and losses from wildfire by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success. Based on this assessment, preventive measures are implemented, including the creation of wildfire protection zones.

Kern County 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 Fire Department Unit Strategic Fire Plan

The KCFD Unit Strategic Fire Plan, adopted in March of 2018 is the most current document that assesses the wildland fire situation throughout the SRA within the County. Similar to other plans, this document

includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire problem. The plan provides for a comprehensive analysis of fire hazards, assets at risk, and level of services to systematically assess the existing levels of wildland protection services and identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires. Additionally, the plan provides an annual report of unit accomplishments, which, in 2017, included completion of a number of fuel reduction projects, hosted three wildfire safety expos in battalions 1, 5, and 7, and the award of three SRA fuel reduction grants for a total of \$500,000. The plan gives an overview of KCFD Battalions and ranks these areas in terms of priority needs as well as identifies the areas of SRA. According to the plan, 69 percent of Kern County areas are within a SRA. The County is broken up into six different fuel management areas, Tehachapi, Western Kern, Northern Kern, Mt. Pinos Communities, Kern River Valley, and Valley. The project site is located within Battalion 1 (Tehachapi) which is within a moderate fire hazard severity zone within the Tehachapi fire plan management area (KCFD 2018).

Kern County Emergency Operations Plan

The Kern County Emergency Operations Plan (KCEOP) is an all-hazards document that provides for the integration and coordination of planning efforts of the County with those of its cities, special districts, and the state region. It provides a framework for the County of Kern to use in performing emergency functions before, during, and after an emergency event, natural disaster, or technological incident. The KCEOP provides for the county's compliance with the Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), the Incident Command System (ICS), the National Response Framework (NRF), and the National Preparedness Guidelines to include Comprehensive Preparedness Guide 101, version 2.0: Developing and Maintaining Emergency Operations Plans (CPG-101). It facilitates multi-agency and multijurisdictional coordination during emergency operations, public information functions, and resource management.

Kern County Department of Environmental Health Services Division

The County of Kern Environmental Health Services Department is the CUPA for the project area, which provides site inspections of hazardous materials programs (above ground storage tanks, underground storage tanks, hazardous waste treatment, hazardous waste generators, hazardous materials management and response plans, and the California Fire Code). This Department also provides emergency response to hazardous materials events, performing health and environmental risk assessment and substance identification.

Kern County and Incorporated Cities Hazardous Waste Management Plan

In response to the growing public concern regarding hazardous waste management, State Assembly Bill 2948 enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within the local government's jurisdiction.

The Kern County and Incorporated Cities Hazardous Waste Management Plan (Hazardous Waste Plan) was first adopted by Kern County and each incorporated city before September 1988 and was subsequently

approved by the State Department of Health Services. The Hazardous Waste Plan was updated and incorporated by reference into the Kern County General Plan in 2004 as permitted by Health and Safety Code Section 25135.7(b) and thus must be consistent with all other aspects of the Kern County General Plan.

The Hazardous Waste Plan provides policy direction and action programs to address current and future hazardous waste management issues that require local responsibility and involvement in Kern County. In addition, the Hazardous Waste Plan discusses hazardous waste issues and analyzes current and future waste generation in the incorporated cities, county, and state and federal lands. The purpose of the Hazardous Waste Plan is to coordinate local implementation of a regional action to effect comprehensive hazardous waste management throughout Kern County. The action program focuses on development of programs to equitably site needed hazardous waste management facilities; to promote on-site source reduction, treatment, and recycling; and to provide for the collection and treatment of hazardous waste from small-quantity generators. An important component of the Hazardous Waste Plan is the monitoring of hazardous waste management facilities to ensure compliance with federal and state hazardous waste regulations.

4.9.4 Impacts and Mitigation Measures

Methodology

The methodology for determining impacts relating to hazardous materials focuses on (1) the potentially significant impacts related to the routine transport, use, or disposal of hazardous materials and the release of hazardous materials into the environment; and (2) proposed project components that could result in environmental contamination.

The methodology for determining impacts relating to wildland fires focuses on the fire severity at the project site and the surrounding areas based on existing state and local maps and land characteristics.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs

consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant adverse effect related to hazards and hazardous materials.

A project could 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 involves handling hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school.
- d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- e. For a project located within the adopted Kern County Airport Land Use Compatibility Plan, would the project result in a safety hazard or excessive noise for people residing or working in the project area.
- f. Impair implementation of, or physically interferes with, an adopted emergency response plan or emergency evacuation plan.
- g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.
- h. Implementation of the project generates vectors (flies, mosquitoes, rodents, etc.) or has a component that includes agricultural waste. Specifically, would the project 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.
- ii. Are associated with design, layout, and management of project operations.
- iii. Disseminate widely from the property.
- iv. Cause detrimental effects on the public health or well-being of the majority of the surrounding population.

Section 4.16, “Wildfire,” discusses potential wildfire impacts as it relates to the proposed project. As such, wildfire impacts are not discussed further in this section.

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

- d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- e. For a project located within the adopted Kern County Airport Land Use Compatibility Plan and would result in a safety hazard for people residing or working in the project area.

Project Impacts

Impact 4.9-1: The project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Implementation of the project includes expansion of the non-hazardous solid waste portion of the Facility, modifications to existing operations (i.e., expansion of existing facilities/permitted uses), renewal of the existing hazardous waste Facility permit, and construction and operation of four tank treatment buildings (TTBs) as described in Chapter 3, *Project Description*.

Non-Hazardous Operations

The project site is currently operating as a hazardous waste Facility. The addition of new non-hazardous waste landfills would continue to result in disposal of nonhazardous waste. The proposed project would allow for increased capacity of nonhazardous waste disposal and continued permitted disposal of hazardous wastes (with no increase in the permitted hazardous waste amounts). No wastes would be stored or handled at the expansion site, which would be used only for the storage of soil stockpiles from the construction of new WMUs at the existing Facility. Impacts from non-hazardous operations would be **less than significant**.

Hazardous Operations

Transportation, storage, and disposal of hazardous materials is extensively regulated by existing federal, State, and local requirements and policies, as outlined in Section 4.9.3, “Regulatory Setting.” The transport of hazardous materials to and from the site is regulated by the California Highway Patrol and Caltrans, whereas disposal of these materials is regulated by DTSC, as outlined in CCR Title 22. As described in Chapter 3, *Project Description*, the project would not result in increased truck trips hauling hazardous material waste; however, it would increase trips associated with hauling of non-hazardous waste. Debris and/or waste generated by construction would be properly disposed of within the site. Expansion of existing facilities (including both solid waste and built structures) and installation of the TTBs during construction would include the storage and use of hazardous materials such as fuels, oils, paints, and solvents. Clean Harbors and any construction contractors would be required to use, store, and transport hazardous materials in compliance with local, state, and federal regulations during project construction activities.

Operation of the project would continue to use, store, and dispose of hazardous materials onsite. As discussed in Chapter 3, *Project Description*, the facility would be permitted to operate the STU for one year from DTSC issuance of the proposed Hazardous Waste Facility permit, and up to one additional year if approved by DTSC based on the timely submission of construction permits for the proposed TTBs to allow for the transition of the treatment operations. Once constructed, the entire waste treatment process will be contained within each of the enclosed TTBs. Further, the tank and container will be non-leaking and will be subject to periodic inspections to assure any leakage is detected and fixed. As described previously in Section 4.9.3, “Regulatory Setting,” the Hazardous Materials Business Plan Act requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs. As a Facility that stores hazardous materials, Clean Harbors is required to have a Hazardous Materials Business Plan (HMBP) prepared and available to guide the operation of their facilities, the intent of which is to minimize risks to human health and the environment. The Kern County Environmental Health Services Division/Hazardous Materials Section is responsible for the review and approval of HMBPs. A revised HMBP shall:

- Delineate hazardous material and hazardous waste storage areas;
- Describe proper handling, storage, transport, and disposal techniques;
- Describe methods to be used to avoid spills and minimize impacts in the event of a spill;
- Describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction;
- Establish public and agency notification procedures for spills and other emergencies including fires; and
- Include procedures to avoid or minimize dust from existing residual pesticide and herbicide use that may be present on the site.

The overall volume of hazardous materials handled at the site would not increase under the proposed project. Compliance with existing Federal State, and local regulations related to the use, storage, and transportation of hazardous materials would ensure that impacts related to transport, use, and disposal of hazardous materials would remain less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.9-2: The project could 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 previously described, the Phase I ESA observed USTs, ASTs, hazardous substances and petroleum products, drums, wells, electrical equipment, a pond, solid waste areas, and controlled RECs within the project site. Through these observations, the Phase I ESA did not identify any areas of the site including evidence of waste disposal that were not already identified as WMU. Further, site observations did not

indicate any evidence of hazardous releases, leaks, or spills. Because no contamination has been detected that would be indicative of a release from the landfills and given the closed-in-place landfills, the Phase I concluded that the site is considered to represent a CREC (Appendix H).

Non-hazardous Operations

Project implementation would involve expansion of the non-hazardous solid waste portion of the Facility as well as modifications to existing operations (i.e., expansion of existing facilities/permitted uses and construction of TTBs), and renewal of the existing hazardous waste disposal permit. As described in Section 4.9.2, “Environmental Setting,” there is a plugged oil and gas well within the area of the proposed Facility expansion. Project construction, including ground disturbing activities associated with Facility expansion, could result in exposure of known or previously undiscovered hazardous materials within the site such as petroleum hydrocarbons, freon, contaminated debris, elevated levels of chemicals that could be hazardous, or hazardous substances that could be inadvertently spilled or otherwise spread during construction. Release and/or exposure to hazardous materials could result in a safety hazard for people residing or working in the project area. Though the existing oil and gas well may be avoided during construction, the potential for accidental release of hazardous materials due to potential disturbance of the abandoned oil and gas well exists. Therefore, these impacts from non-hazardous operations would be potentially significant. Implementation of Mitigation Measure MM 4.9-2 would require Clean Harbors to cease work and coordinate with applicable agencies to fulfill protocol and approval requirements in the event that any abandoned or unrecorded wells are uncovered/damaged as a result of project construction. Impacts related to upset/accident hazardous material conditions would be reduced to less than significant.

Hazardous Operations

The existing plugged oil and gas well is located within the expansion (soil storage) area, and would not be affected by construction of the four new TBBs and DSBs. Should any hazardous materials or conditions be encountered, project contractors and Clean Harbors would be required to comply with the renewed Hazardous Waste Facility Permit, as well as all federal, State, and local regulations related to the remediation and disposal of any contaminated or hazardous materials encountered during project construction, as well as regulations pertaining to worker safety. Compliance would involve coordination with various agencies regarding appropriate methods to address any contamination found at the project site, and disposal of hazardous materials in a manner consistent with applicable regulations at an appropriate off-site disposal Facility.

Once construction activities are complete, the project site would operate similarly to existing conditions (i.e., a hazardous and non-hazardous landfill); however, would be able to accommodate increased waste within the Facility and would include operation of four new TTBs. As described above and in Chapter 3, *Project Description*, the entire waste treatment process will be contained within each enclosed TTBs and each tank and container will be non-leaking subject to periodic inspections. Further, the design of the TTBs includes a secondary containment system to collect liquid waste spillage, fire suppression deluge water, equipment or building wash waters, emergency eye wash or emergency shower discharges, or other liquids, and additional containment is provided via a continuous concrete containment curb around each of the TTBs building perimeter.

As described in Section 4.9.2, “Environmental Setting,” findings of the HRA indicated that health impacts for resident or worker pollutions in the vicinity of the Facility, due to potential exposure to emissions

resulting from project construction and operation activities, are well below the SJAPCD thresholds of significance (Appendix C). Because remediation/disposal of any identified hazardous materials would be implemented in accordance with applicable laws and regulations intended to protect workers and the public from exposure to hazardous materials, impacts from hazardous operations would be less than significant.

Mitigation Measures

MM 4.9-1: The project proponent shall continuously comply with the following:

- a. The project proponent shall not build any structure within 10 feet of the existing plugged and abandoned well located within the project boundaries.
- b. Prior to permit approval, the project proponent/operator shall consult with California Geologic Energy Management Division to determine if well testing is necessary to verify that no harmful substances, such as gas or oil, are leaking from the existing plugged wells onsite. If testing is required, the results of the well test shall be submitted to the California Geologic Energy Management Division for review and approval. A copy of California Geological Energy Management Division's approval shall be submitted to the Kern County Planning and Natural Resources Department.
- c. Surveyed locations of wells shall be provided to the California Geologic Energy Management Division in Latitude and Longitude, North American Datum 83 decimal format.
- d. Any wells found leaking shall be reported to California Geologic Energy Management Division immediately. Any wells that do not meet the aforementioned testing requirements shall be resealed and properly plugged and re-abandoned consistent with California Geologic Energy Management Division requirements. However, if there is evidence of contaminants found during testing, the qualified consultant shall prepare a report detailing the results of the testing and a work action plan to remediate any contamination found and to plug the wells. Any soil containing hydrocarbons shall be disposed of in accordance with local, state, and federal laws. The completed report and work action plan will be submitted to California Geologic Energy Management Division and the Kern County Department of Planning and Natural Resources for comment and review.
- e. All final stamped and approved project design plans will be provided to the California Geologic Energy Management Division for the record.
- f. If during construction activities, any new wells are encountered, all work shall cease in the vicinity of the well, and the project proponent would immediately notify the California Geologic Energy Management Division's construction site well review engineer in the Inland District Office, and file for California Geologic Energy Management Division review of an amended site plan with well casing diagrams.

Level of Significance after Mitigation

Impacts would be less than significant with implementation of Mitigation Measure 4.9-1.

Impact 4.9-3: The project would not emit hazardous emissions or involves handling hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school.

As described above, the project site is not located within 0.25 miles of any schools. The nearest school is Buttonwillow Union Elementary School, located approximately 3 miles northeast of the project site. Because there are no existing and/or planned schools within 0.25 miles of the project site, project implementation would not result in emission or handling of hazard materials, substances or waste within 0.25 miles of a school. No impact would occur.

Mitigation Measures

No mitigation measures required.

Level of Significance

No impact.

Impact 4.9-4: The project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

As previously described, the KCEOP provides a framework for response to all significant emergencies, regardless of the nature of the event. The project would include expansion of the non-hazardous solid waste portion of the Facility as well as modifications to existing operations (i.e., expansion of existing facilities/permitted uses) and renewal of the existing hazardous waste disposal permit. Project implementation would not modify existing emergency routes or amend the County's existing emergency operations plan. Further, project construction and operation activities would occur within the project site, on Facility-owned property and would neither impede nor interfere with local roadway access along Lokern Road. Therefore, the project would not impair implementation of or physically interfere with an adopted emergency plan; impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.9-5: The project could expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

The project site is not within the SRA and is not within very high fire hazard severity zone. However, the area directly south of the project site is within the SRA and is designated as a moderate fire hazard severity zone (CAL FIRE 2022a). Implementation of the project would include expansion of the non-hazardous solid waste portion of the Facility as well as several modifications to existing operations (i.e., expansion of

existing facilities/permitted uses) and renewal of the existing hazardous waste disposal permit. As described in Section 4.14, *Public Services*, the project proponent would implement Mitigation Measure MM 4.14-1, which would require preparation and submittal of a Fire Safety Plan to the County prior to issuance of project grading or building permits for review and approval which would ensure that fire emergency precautions and procedures are taken, if necessary. However, even without implementation of Mitigation Measure 4.14-1, project construction and operation activities would occur in compliance with state and local fire requirements related to fire and building safety, including Implementation Measure A of the County's General Plan Safety Element, which requires compliance with the Uniform Fire Code for facilities manufacturing, storing, and/or using hazardous materials. Because the project is not located within a very high fire hazard severity zone and project implementation would comply with state and local requirements related to fire safety, the project would not expose people or structured to increased risks associated with wildland fires. Impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measure 4.14-1, as described in *Public Services*.

Level of Significance after Mitigation

Impacts would be less than significant with implementation of Mitigation Measure MM 4.14-1.

Impact 4.9-6: The project could generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste exceeding adopted qualitative thresholds.

The existing landfill has been in operation since the 1980s and currently accepts waste streams that have the potential to generate vectors such as flies, mosquitoes, and rodents. Expansion of the existing non-hazardous solid waste portion of the Facility, modifications to existing operations (i.e., expansion of existing facilities/permitted uses), and renewal of the existing hazardous waste disposal permit would introduce the potential to generate additional vectors during operation. Vectors at the Facility would be managed in accordance with CalRecycle regulations (CCR Titles 14 and 27) and enforced by the LEA (Kern County Solid Waste Program) through the facilities solid waste permits. Further, the proposed design, layout, and management methods for implementation of the project would be designed to reduce the potential for vector generation.

All waste streams within the existing Facility are covered in accordance with 27 CCR 20680 requirements. Vector management measures are currently implemented at the Facility, and Clean Harbors has developed vector-related design and operational features to control or prevent the propagation, harborage, or attraction of flies, rodents, and birds. Project construction and operation would continue to comply with CCR Title 27 requirements, Facility management measures, and Facility design and operational features.

Though the Facility implements measures to control sources of vectors and birds, expansion of existing facilities, modifications to operations, expansion of non-hazardous waste disposal, and the increased footprint of the project site could have a potentially significant impact on vector control.

Implementation of Mitigation Measure MM 4.9-2 would reduce vector-related impacts to a less-than-significant level by requiring preparation and approval of a Vector Control Plan that would ensure

application of Best Management Practices for vector controls (i.e., abatement control, pest management) within the project site.

Mitigation Measures

MM 4.9-2: Prior to the issuance of grading or building permits the project proponent shall prepare a Vector Control Plan (Plan), or revise any existing Plan, and submit it to the Kern County Environmental Health Services Division for review and approval. The Plan shall include Best Management Practices such as: good housekeeping measures to minimize harborage for vectors, and the timely incorporation of material into the composting process. Further controls may include the use of traps or other abatement controls, and/or the use of a licensed pest management service, if needed.

Level of Significance

Impacts would be less than significant with implementation of Mitigation Measure MM 4.9-2.

Cumulative Setting, Impacts, and Mitigation Measures

As described in Chapter 3, *Project Description*, multiple projects are proposed throughout Kern County and northern Los Angeles County (See Table 3-8, *Cumulative Project List*). The geographic scope of impacts associated with hazardous materials generally encompasses the project site and a 0.25-mile-radius area around the project sites. A 0.25-mile-radius area allows for a conservative cumulative analysis that ensures that all potential cumulative impacts will be assessed. Though some hazardous materials releases can cover a large area and interact with other releases (e.g., atmospheric contamination, contamination of groundwater aquifers), incidents of hazardous materials contamination are typically isolated to a small area, such as leaking underground storage tank sites or release at individual businesses. Because of this, isolated areas of contamination typically do not interact in a cumulative manner with other sites of hazardous materials contamination. However, if the project would create a new site of contamination or contribute substantially to a hazardous condition in the general project area, it could be considered to contribute to a cumulative impact. Impacts related to emergency vehicle access and response are considered site specific and not cumulatively considerable.

As discussed in Impact 4.9-1, the project has the potential to create significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials. However, implementation of existing regulations would ensure that a new or updated Hazardous Materials Business Plan be prepared to ensure necessary protocol is implemented with regard to hazards and hazardous material response, safety, storage, transport, and staff training.

While there is potential for the project to result in accident conditions involving the release of hazardous materials to occur with regard to an existing oil and gas well (Impact 4.9-2), implementation of Mitigation Measure 4.9-1 would require coordination with applicable agencies to fulfill protocol and approvals requirements in the event that any abandoned or unrecorded wells are uncovered/damaged as a result of project construction. Mitigation Measure MM 4.9-1 would therefore reduce the project's contribution to a potential cumulative hazardous release impact to less than cumulatively considerable.

As described in Impact 4.9-6, the project has potential to result in increased vectors within the project site. Implementation of Mitigation Measure MM 4.9-2 would require preparation and approval of a Vector Control

Plan that would ensure application of Best Management Practices for vector controls (i.e., abatement control, pest management) within the project site. Mitigation Measure MM 4.9-2 would therefore reduce the project's contribution to a potential cumulative vector impact to less than cumulatively considerable.

The project would not impair implementation of nor physically interfere with an adopted emergency plan (Impact 4.9-4), is not located within 0.25 miles of any existing or proposed schools (Impact 4.9-3), and is would not expose people or structures to increased risks associated with wildland fires (Impact 4.9-5). Therefore, the project would not have the potential to combine with impacts from other projects to pose hazards related to emergency plans, schools, or wildland fires.

As discussed above, implementation of Mitigation Measures MM 4.9-1 and MM 4.9-2 would reduce the project's contribution to a potential cumulative hazards and hazardous materials impact to less than cumulatively considerable. Therefore, cumulative impacts would be less than significant with incorporation of mitigation measures.

Mitigation Measures

Implement Mitigation Measures MM 4.9-1 and MM 4.9-2.

Level of Significance after Mitigation

Less than significant with implementation of feasible mitigation measures MM 4.9-1 and MM 4.9-2.

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4.10.1 Introduction

This section of the EIR describes the hydrological environmental and regulatory settings, addresses potential impacts of the project on hydrology and water quality, and discusses mitigation measures to reduce impacts, where applicable. The information in this section is based on numerous available sources, as well as the Joint Technical Document (Geosyntech 2018) and the Water Supply Assessment (Appendix K, prepared by Ramboll in 2021) prepared for the project.

4.10.2 Environmental Setting

Regional Setting

The project site is located in the southwestern region of the Central Valley, a broad alluvial valley that dominates central California. The Central Valley is divided into three hydrologic regions or surface water basins including the Sacramento River Basin in the north, the San Joaquin River Basin in the center, and the Tulare Lake Basin to the very south. The project site is located within the Tulare Lake Basin which is an enclosed basin with no drainage outlets to the ocean.

Tulare Lake Hydrologic Unit (No. 18030012)

The Tulare Lake Basin hydrologic unit includes valley floor alluvial fans of the Kings, Kaweah, Tule and Kern Rivers, several lesser streams from the Sierra foothills, the historic lake bed of the great Tulare Lake and other historic lakes, as well as the southwestern uplands. While most Sierra Nevada drainages flow into the San Joaquin Valley and ultimately out to the Pacific Ocean through the San Joaquin River, the four major southern Sierra rivers: the Kings, Kaweah, Tule and Kern, as well as a number of lesser streams, including Deer Creek, White River, and Poso Creek, all flow west across the Central Valley into the Tulare-Buena Vista Lake Basin's terminal lakes.

These rivers and creeks historically formed broad deltaic fans as they emerged from the foothills and flowed, undammed, to the Tulare Basin in dozens of channels and sloughs that shifted periodically during flood events. Today, dams manage water flow on the Kings, Kaweah, Tule and Kern rivers. The Tulare Basin originally contained five lakes: Tulare Lake, historically the largest freshwater lake in the contiguous United States west of the Mississippi River, Kern Lake, Buena Vista Lake, Goose Lake, and Summit Lake. These lakes were connected via a system of shallow, slow-moving, tule-lined sloughs. Historically, in years of higher precipitation and higher Tulare Lake elevations, excess flows would drain towards San Joaquin River. Today, diversions for agriculture and municipal uses have largely reduced nearly all of the drainage to Tulare Lake.

The Tulare Basin receives water from five sources: precipitation, runoff from local rivers and streams, groundwater, State Water Project delivery, and Central Valley Project delivery. During much of the time, irrigation and other water supply requirements determine the quantity and movement of water in the Tulare

Basin. In years of high winter rainfall and spring snowmelt runoff, flood control concerns influence water movement. In average and drier years, surface water moves throughout the Basin primarily by gravity flow in natural stream channels and constructed canals or ditches. In some locations, pumping distributes irrigation water or drains water.

Climate

The climate of the Tulare Basin is characterized by hot, dry summers and cold winters with relatively low annual precipitation. Average temperatures recorded in the community of Buttonwillow range from an average low of 34.5° Fahrenheit (F) in December to highs of 98.4° F in July (WRCC 2022). Precipitation is typically highest in the November to April timeframe but is still relatively low with an annual average of 5.64 inches. **Table 4.10-1, Average Monthly Temperatures and Precipitation for the Antelope Valley, Kern County**, summarizes average temperatures and precipitation for Buttonwillow, CA, which is located approximately 8 miles east of the project site.

TABLE 4.10-1: AVERAGE MONTHLY TEMPERATURES AND PRECIPITATION FOR THE ANTELOPE VALLEY, KERN COUNTY

Station	Elevation	Average Annual Maximum Temperature	Average Annual Minimum Temperature	Average Annual Precipitation
Buttonwillow, CA (Coop ID 041244)	270 feet	77.9°F	49.0°F	5.64 in/yr

Source: WRCC 2022

Site Hydrology

Surface Hydrology and Drainage

The project site is surrounded by undeveloped land where drainage occurs as overland sheet flow within existing drainage channels that drain towards the northeast. However, the project site, as an existing solid waste disposal site, is designed to contain runoff from a 24-hour 1,000-year storm event (defined as an event that has a 0.1 % chance of occurring in any given year) as required by Title 27 of the California Code of Regulations and 40 CFR 25.82(a)(3)(ii)

Floodplains

The existing Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) that includes the existing project site indicates that the northwest corner of the site is located within the designated 100-year Special Flood Hazard Area (SFHA) floodplain (FEMA 2022). See **Figure 4.10-1, FEMA Flood Zone Map**. A re-evaluation of the 100-year floodplain using updated topographic information and more detailed hydrologic and hydraulic methods was performed and included as part of the 2018 Joint Technical Document. The floodplain study determined that the existing floodplain extents are based on an April 2015 topography and may not reflect current conditions. The results of the floodplain study and proposed floodplain conditions are discussed further below in the impact discussion (4.10.4 Impacts and Mitigations).

Soil Types and Erosion

Soil types were taken from the published survey by the National Resources Conservation Service (NRCS) Soils Survey for Kern County. According to data for the project site and vicinity, there are primarily three USDA soil units identified in the area including Kimberlina fine sandy loam, Kimberlina sandy loam, and Panoche clay loam (NRCS 2022). The project site appears to be located within the area mapped as Kimberlina sandy loam. These soils are well drained with low runoff and moderate to high infiltration rates although the Panoche clay loam can have a moderately low ability to transmit water. However, as an existing solid waste Facility much of the surface soils have likely been reworked to varying degrees and the presence of native surface soils may have been altered.

Groundwater Resources

The project site is located in the Tulare Lake Hydrologic Region which has 12 distinct groundwater basins and 7 subbasins. The site is located in the San Joaquin Valley Groundwater Basin/Kern County Groundwater Subbasin, California Department of Water Resources (DWR) Bulletin 118 Basin No. 5-22/Subbasin No. 5-22.14 (DWR 2018). The Kern County Groundwater Subbasin (Subbasin) covers about 3,000 square miles (1,945,000 acres) in Kern County. It is bounded by the Kern, Kings, and Tulare County lines to the north, the granitic bedrock of the Sierra Nevada and Tehachapi Mountains to the east and south-east, and the marine sediments of the San Emigdio Mountains and Coast Ranges to the southwest and west. The Kern River, which originates in the Sierra Nevada, is the primary stream flowing through the subbasin area (USGS 2012).

The Kern County Water Agency has estimated the total water in storage for the Subbasin to be 40-million-acre feet (maf) and that the Subbasin had an average annual storage loss of 325,000 acre-feet per year (afy) during the period of 1970 to 1998. The Subbasin falls under the jurisdiction of the Kern Groundwater Authority (KGA) as the Groundwater Sustainability Agency in accordance with the California Sustainable Groundwater Management Act (SGMA). The KGA includes 16 member entities made up of water districts/agencies, groundwater banking projects, and organized non-districted lands. The project site is covered by the Westside District Water Authority's Management Area Plan within the Kern Groundwater Authority's Groundwater Sustainability Plan through an agreement with Belridge Water Storage District.

According to model simulation that was prepared for KGA in their umbrella Groundwater Sustainable Plan (GSP), over the historical base period 1995-2014, average annual pumping is 1,590,373 afy with a decline in groundwater storage of 277,114 afy. Subtracting the groundwater storage decline from groundwater pumping produced a sustainable yield of approximately 1,313,000 afy for the Kern Subbasin.

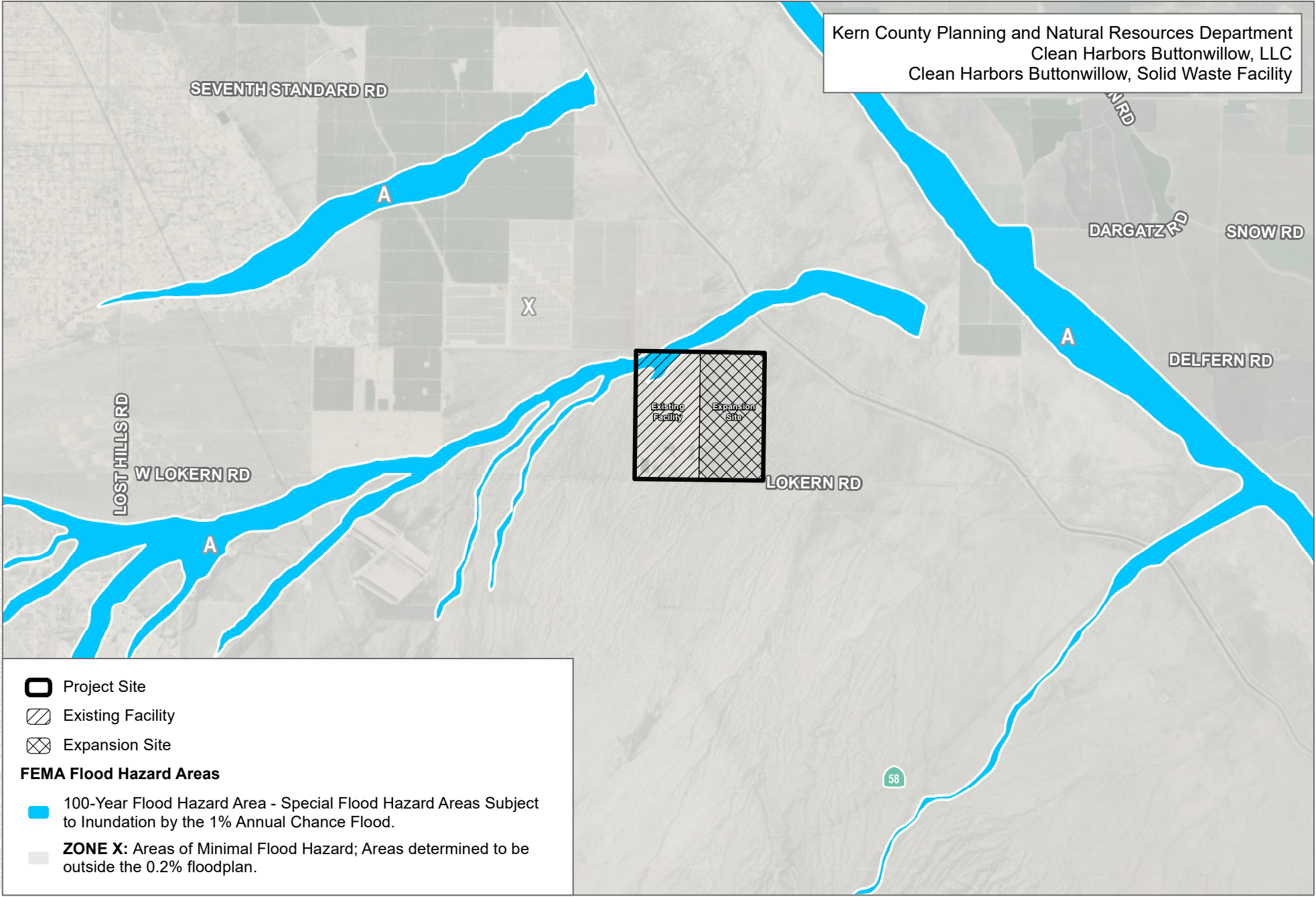
The KGA GSP also examined the native yield of the Subbasin based on data from the computer model but not using the computer model:




- The volume of precipitation that recharges the groundwater in the irrigated agricultural areas is 77,780 afy
- The volume of precipitation that recharges groundwater in the other areas is 132,981 afy
- The volume of inflow from unallocated small watersheds that recharges the groundwater in the irrigated agricultural areas is 48,760 afy
- The above inputs resulted in a native yield for the Subbasin of 259,520 afy

The primary sources of recharge in the Subbasin are from the Kern River and artificial recharge at ground-water banking facilities that exist throughout most of the subbasin area. Secondary sources of recharge include return flows from agricultural and municipal irrigation and infiltration of flows from intermittent streams along the edge of the subbasin. The primary sources of groundwater discharge are water pumped for irrigation and municipal supply (USGS 2012).



At the project site, there are three underlying water-bearing units, aquifers, known as the Upper Perched Zone, found in the upper sand unit perched above the Upper Clay Layer; the Intermediate Perched Zone, found in the sandy Intermediate Unit perched above the Lower Clay Layer; and the Lower Water Table Zone, found in the sandy Lower Unit (sands) with the Corcoran Clay Layer as the lower confining layer. The Upper Perched Zone is the water-bearing zone closest to ground surface and is the “Uppermost Aquifer” (as defined by Title 27 CCR, Section 20164).

Kern County Planning and Natural Resources Department
 Clean Harbors Buttonwillow, LLC
 Clean Harbors Buttonwillow, Solid Waste Facility



-  Project Site
-  Existing Facility
-  Expansion Site

FEMA Flood Hazard Areas

-  100-Year Flood Hazard Area - Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood.
-  **ZONE X:** Areas of Minimal Flood Hazard; Areas determined to be outside the 0.2% floodplan.

SOURCE: NAIP 2016, FEMA

2022

FIGURE 4.10-1
FEMA Flood Zone Map
 Clean Harbors

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4.10.3 Regulatory Setting

Federal

Clean Water Act

The Clean Water Act (CWA) (33 U.S. Code 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 required 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 the 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 Regional Water Quality Control Boards (RWQCBs). The project site is within the Central Valley 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, which may result in discharges into waters of the U.S., must be certified by the state, as administered by the RWQCB. This certification ensures that the proposed activity does not violate state and/or federal water quality standards.

Section 402, National Pollutant Discharge Elimination System. Section 402 of the CWA authorizes the State Water Resources Control Board (SWRCB) to issue a NPDES General Construction Storm Water Permit (Water Quality Order 2009-0009-DWQ), referred to as the “General Construction Permit.” Construction activities can comply with and be covered under the General Construction Permit provided that they:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies best management practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving off site into receiving waters.
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation.
- Perform inspections of all BMPs.

NPDES regulations are administered by the Central Valley RWQCB. Projects that disturb 1 or more acres, including the proposed project, are required to obtain NPDES coverage under the Construction General Permit.

Section 404, Discharge of Dredged or Fill Materials. Section 404 of the CWA establishes programs to regulate the discharge of dredged and fill material in waters of the U.S., including wetlands. For purposes of section 404 of the CWA, the limits of non-tidal waters extend to the ordinary high water line, defined as the line on the shore established by the fluctuation of water and indicated by physical characteristics, such as natural line impressed on the bank, changes in the character of the soil, and presence of debris. When an application for a Section 404 permit is made the applicant must show it has:

- Taken steps to avoid impacts to wetlands or waters of the U.S. where practicable;
- Minimized unavoidable impacts on waters of the U.S. and wetlands; and

- Provided mitigation for unavoidable impacts.

Section 404 of the CWA requires a permit for construction activities involving placement of any kind of fill material into waters of the U.S. or wetlands. A water quality certification pursuant to Section 401 of the CWA is required for Section 404 permit actions. If applicable, construction would also require a request for water quality certification (or waiver thereof) from the Central Valley RWQCB. Project activities would adhere to state and federal water quality standards and would be in compliance with Sections 401 and 404 of the CWA.

Section 303, Water Quality Standards and Implementation Plans. Section 303(d) of the CWA (33 U.S. Code 1250, et seq., at 1313(d)) requires states to identify “impaired” water bodies as those which do not meet water quality standards. States are required to compile this information in a list and submit the list to the U.S. Environmental Protection Agency 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 loads (TMDL) requirements. The SWRCB and RWQCBs have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to develop TMDL requirements.

National Flood Insurance Act

FEMA is responsible for managing the National Flood Insurance Program (NFIP), which makes federally backed flood insurance available for communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage.

The NFIP, established in 1968 under the National Flood Insurance Act, requires that participating communities adopt certain minimum floodplain management standards, including restrictions on new development in designated floodways, a requirement that new structures in the 100-year flood zone be elevated to or above the 100-year flood level (known as base flood elevation), and a requirement that subdivisions be designed to minimize exposure to flood hazards.

To facilitate identifying areas with flood potential, FEMA has developed Flood Insurance Rate Maps (FIRMs) that can be used for planning purposes, including floodplain management, flood insurance, and enforcement of mandatory flood insurance purchase requirements. Kern County is a participating jurisdiction in the NFIP and, therefore, all new development must comply with the minimum requirements of the NFIP.

State

Department of Water Resources

The major responsibilities of the California Department of Water Resources (DWR) include preparing and updating the California Water Plan to guide development and management of the state's water resources; planning, designing, constructing, operating, and maintaining the State Water Resources Development System; regulating dams; providing flood protection; assisting in emergency management to safeguard life and property; educating the public; and serving local water needs by providing technical assistance. In addition, DWR cooperates with local agencies on water resources investigations, supports watershed and

river restoration programs, encourages water conservation, explores conjunctive use of ground and surface water, facilitates voluntary water transfers, and, when needed, operates a state drought water bank.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Water Code Sections 13000 et seq.), passed in 1969, requires protection of water quality. The Porter-Cologne Act established the SWRCB and divided California into nine regions, each overseen by a RWQCB. The SWRCB is the primary state agency responsible for protecting the quality of the state’s surface and groundwater supplies and has delegated primary implementation authority to the nine RWQCBs. The Porter-Cologne Act assigns responsibility for implementing CWA Sections 401 through 402 and 303(d) to the SWRCB and the nine RWQCBs.

The Porter-Cologne Act requires the development and periodic review of water quality control plans (basin plans) that designate beneficial uses of California’s major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters, provide the technical basis for determining waste discharge requirements, identify enforcement actions, and evaluate clean water grant proposals. The basin plans are updated every three years. Compliance with basin plans is primarily achieved through implementation of the NPDES, which regulates waste discharges as discussed above.

The Porter-Cologne Water Quality Control Act requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, which could affect the quality of the “waters of the State,” file a report of waste discharge. Absent a potential effect on the quality of “waters of the State,” no notification is required. However, the RWQCB encourages implementation of BMPs similar to those required for NPDES storm water permits to protect the water quality objectives and beneficial uses of local surface waters as provided in the Central Valley Region Water Quality Control Plan (Basin Plan) (RWQCB 2018).

Streambed Alteration Agreement (California Fish and Game Code)

Section 1602 of the California Fish and Game Code protects the natural flow, bed, channel, and bank of any river, stream, or lake designated by the California Department of Fish and Wildlife (CDFW) in which there is, at any time, any existing fish or wildlife resources, or benefit for the resources. Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state, and requires any person, state or local governmental agency, or public utility to notify the CDFW before beginning any activity that will:

- Substantially divert or obstruct the natural flow of any river, stream or lake;
- Substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

During final engineering and design of a project, if it is determined that any project-related actions would have the potential to necessitate a streambed alteration agreement, such an agreement would be prepared and implemented prior to construction of the project, thus maintaining compliance with Section 1602 of the California Fish and Game Code. A streambed alteration agreement is required if the CDFW determines the activity could substantially adversely affect an existing fish and wildlife resource. The agreement includes

measures to protect fish and wildlife resources while conducting the project. CalRecycle - California Code of Regulations – Title 27

CalRecycle (formerly California Integrated Waste Management Board) regulates solid waste handling, processing, and disposal activities for all landfills as well as transfer-processing stations, material recovery facilities, compost facilities, and waste-to-energy facilities. CalRecycle's enforcement efforts focus on ensuring facilities are operating according to state minimum standards and permit conditions. Activities include certifying and evaluating local enforcement agency programs; reviewing/concurring on permit and closure/post closure documents; inspecting all facilities before permits are issued; and inspecting active and closed landfills and other facilities. Nearly all CalRecycle regulations are found in Title 14 and Title 27 of California Code of Regulations (CCR). Title 27 includes criteria for all waste management units, facilities, and disposal sites that include drainage control and water quality monitoring as well as leachate control design requirements. Title 27 also includes Waste Discharge Requirements (WDRs) (Title 27 § 21720) that are administered by the State Water Resources Control Board.

Sustainable Groundwater Management Act (SGMA)

In September 2014, the Sustainable Groundwater Management Act (SGMA) was passed as a three bill legislative package composed of AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley). The legislation provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for state intervention when necessary to protect the resource. The legislation lays out a process and a timeline for local authorities to achieve sustainable management of groundwater basins. It also provides tools, authorities and deadlines to take necessary steps to achieve the goal. In general, to comply and implement SGMA, agencies must:

1. Form local Groundwater Sustainability Agencies (GSA) (deadline by 6/30/2017);
2. GSAs must adopt Groundwater Sustainability Plans (GSPs) within five to seven years, depending on whether a basin is in critical overdraft (deadline 1/31/2020 for critically over drafted basins or 1/31/2022 for high and medium priority basins not currently in overdraft); and,
3. Once GSPs are in place, local agencies have 20 years to fully implement and achieve the sustainability goal.

For the Kern County Subbasin, the Kern Groundwater Authority is the GSA which includes 16 member entities made up of water districts/agencies, groundwater banking projects, and organized non-districted lands. The project site is located within the Westside District Water Authority's Management Area Plan.

Local

Kern County General Plan

The policies, goals, and implementation measures in the Kern County General Plan for hydrology and water resources applicable to the proposed project are provided below. Policies, goals, and implementation measures in the General Plan that are not specific to development are not listed below. However, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Land Use, Open Space, and Conservation Element

1.3 Physical and Environmental Constraints

Policies

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

Policy 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

Measure F: The County will comply with the Colbey-Alquist Floodplain Management Act in regulating land use within designated floodways.

Measure H: Development within areas subject to flooding, as defined by the appropriate agency, will require necessary flood evaluations and studies.

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.

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 Resources

Policy

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 41: Review development proposals to ensure adequate water is available to accommodate projected growth.

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

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

Implementation Measure

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; and (iii) Encouraging the retrofitting of existing development with water conserving devices.

Safety Element

Goals

- 1) Minimize injuries and loss of life and reduce property damage.
- 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.
- 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.
- 4) Create an awareness of the residents in Kern County through the dissemination of information about geologic, fire, and flood safety hazards.

Policies

- 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.
- 2) Those hazardous areas, identified as unsuitable for human occupancy, are guided toward open space uses, such as agriculture, wildlife habitat, and limited recreation.

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

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.

B) The Safety Element should be reviewed and comprehensively revised every five years, or whenever substantially new scientific evidence becomes available.

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.

D) Require seismic review prior to major addition, renovation, or increase in occupancy of buildings.

Kern County Zoning Ordinance

Chapter 19.70 Floodplain Combining District

Section 19.70.040 prohibits the following uses in the Floodplain Combining District, as applicable to the proposed project:

Implementation Measures

Measure B: All uses that will likely increase the flood hazard or affect the water-carrying capacity of the floodplain beyond the limits resulting from encroachment as specified in Section 19.70.130.

Measure C: Dumping, stockpiling, or storage of floatable substances or other materials which, in the opinion of the Kern County and Survey Services Department, will add to the debris loads of the stream or watercourse, unless protected by flood control devices approved by the Kern County Public Works Department and constructed in accordance with Section 19.70.130.

Measure G: Sources of water supply (e.g., wells, springs) unless protected by flood control devices approved by the Kern County Public Works Department and constructed in accordance with the requirements of the Kern County Health Department so as to minimize infiltration of floodwaters.

Kern County Grading Ordinance (17.28)

Chapter 17.28 Kern County Grading Code. The Kern County Grading Code requires that a grading permit be obtained prior to commencement of construction activities. Of particular note with respect to hydrology and water quality is Section 17.28.140, Erosion Control, which addresses the following:

- **Slopes.** The faces of cut and fill slopes shall be prepared and maintained to control against erosion. This control may consist of effective planting. The protection for the slopes shall be installed as soon as practicable and prior to calling for final approval. Where cut slopes are not

subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.

- **Other Devices.** Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety.
- **Temporary Devices.** Temporary drainage and erosion control shall be provided as needed at the end of each work day during grading operations, such that existing drainage channels would not be blocked. Dust control shall be applied to all graded areas and materials and shall consist of applying water or another approved dust palliative for the alleviation or prevention of dust nuisance. Deposition of rocks, earth materials or debris onto adjacent property, public roads or drainage channels shall not be allowed.

Kern County Floodplain Management Ordinance (17.48)

Any construction that takes place within areas of special flood hazards, areas of flood-related erosion hazards, and areas of mudslide 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. Sections 17.48.250 through 17.48.350 of the ordinance elaborate on the standards of construction in the special flood hazards area.

Kern County Development Standards

The Kern County development standards apply to all developments within Kern County that are outside of incorporated cities. These standards establish minimum design and construction requirements that will result in improvements that are economical to maintain and will adequately serve the general public. The requirements set forth in these standards are considered minimum design standards and will require the approval of the entity that will maintain the facilities to be constructed prior to approval by the County.

Kern County – Applicability of NPDES Program for a Project Disturbing 1 Acre or Greater

As closed systems that never contact the ocean or other waters of the U.S., many of the waters within Kern County are technically not subject to protective regulations under the federal NPDES Program. The Kern County Public Works Department requires the completion of an NPDES applicability form for projects with construction activities disturbing 1 or more acres, and requires the project proponent to provide information about construction activities and to identify whether storm water runoff has the potential of discharging into waters of the United States, waters of the state, or a terminal drainage facility. The purpose of the form is to identify which water quality protection measure requirements apply to different project (if any). Should storm water runoff be contained on site and not discharge into any waters, no special actions are required. Should storm water runoff discharge into waters of the United States, compliance with the SWRCB Construction General Permit SWPPP requirements is required. Should storm water runoff not be contained on site and drains to waters of the state or a terminal drainage facility, the project proponent would be required to develop a SWPPP and BMPs.

Kern Groundwater Authority

The Kern Groundwater Authority (KGA) is a coordination group for the San Joaquin Valley - Kern County Subbasin, that was created prior to the enactment of SGMA with the intent of establishing a framework for the coordinated management of the groundwater basin underlying the San Joaquin Valley portion of Kern County, including the preservation and maintenance of local control over groundwater resources and to provide future certainty for basin users. With the passage of SGMA (see above), the KGA elected to form a GSA under a Joint Powers Agreement (JPA) to assume responsibility for development of a comprehensive Groundwater Sustainability Plan (GSP) for Subbasin.

4.10.4 Impacts and Mitigation Measures

Methodology

This section analyzes impacts on hydrology and water quality from the implementation of the project based on changes to the environmental setting as described above, identified drainage conditions in the project site, and the current regulatory framework. Impacts were evaluated based on a review of available data and information, which is summarized above, and consideration of changes that would occur as a result of project implementation, in comparison to existing conditions.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

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

A project could have a significant adverse effect on hydrology and water quality if the project would:

- a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
- b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - i. Result in substantial erosion or siltation on site or off site;
 - ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off site;
 - iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
 - iv. Impede or redirect flood flows;
- d. Result in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation;
- e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan;

Project Impacts

Impact 4.10-1: The project could violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality.

Construction

The construction of the proposed additional non-hazardous waste landfill units (WMUs) at the existing Facility would include earthwork activities that would disturb onsite soils. These earthwork activities would affect current drainage patterns and could expose soils to the effects of wind and water erosion on the project site, if not managed appropriately.

Potential impacts on water quality from erosion and sedimentation are expected to be localized and temporary during construction activities. The Kern County Public Works Department requires the completion of an NPDES applicability form for projects with construction activities that would disturb 1 or more acre within Kern County. Discharges at the existing Facility are already managed by a SWPPP and must adhere to applicable requirements of Title 27 CCR. However, Mitigation Measure MM 4.10-1 would require an updated SWPPP be prepared prior to any project related earthmoving (grading or construction). The SWPPP shall include BMPs that would be implemented to prevent soil erosion and discharge of other

construction-related pollutants that could contaminate offsite drainages and would be applicable to all areas of the project. Specific BMPs for the construction phase of the proposed project would be identified during completion and County review of the SWPPP. However, typical BMPs to be implemented would include the following:

- a. Stockpiling soils and fill materials with appropriate protections;
- b. Installation of a stabilized construction entrance/exit and stabilization of disturbed areas;
- c. Implementing erosion controls;
- d. Properly managing construction materials;
- e. Proper protections for fueling and maintenance of equipment and vehicles; and
- f. Managing waste, aggressively controlling litter, and implementing sediment controls.

In addition, prior to the commencement of construction activities, the project proponent would be required to adhere to the requirements of the Kern County Grading Ordinance, which requires implementation of erosion control measures to protect water quality.

During project construction, any activity that results in the accidental release of hazardous or potentially hazardous materials could result in water quality degradation. Materials that could contribute to this impact include diesel fuel, gasoline, lubricant oils, hydraulic fluid, antifreeze, transmission fluid, lubricant grease, cement slurry, and other fluids used by construction and maintenance vehicles and equipment. Motorized equipment could leak hazardous materials, such as motor oil, transmission fluid, or antifreeze, due to inadequate or improper maintenance, unnoticed or unrepaired damage, improper refueling, or operator error. As noted in Section 4.9, *Hazards and Hazardous Materials*, of this EIR, preparation and implementation of an updated Hazardous Materials Business Plan (HMBP) is required. The HMBP would delineate hazardous material and hazardous waste storage areas; describe proper handling, storage, transport, and disposal techniques; describe methods to be used to avoid spills and minimize impacts in the event of a spill; describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction; and establish public and agency notification procedures for spills and other emergencies, including fires. The project proponent would provide the updated HMBP to all contractors working on the project and would ensure that one copy is available at the project site at all times. Implementation of the updated HMBP would ensure that all hazardous materials are handled, stored, and disposed of in a manner that is protective of water quality in stormwater runoff such that potential impacts during construction would be less than significant.

Operation

Surface Water

Operation of the proposed project would result in changes to existing drainage patterns onsite. However, the proposed project, consistent with the requirements of Title 27 CCR, would control all surface water discharges internally at the Facility as currently occurring under existing conditions. Surface water discharges would continue to be monitored in accordance with the current SWPPP for existing operations. Operations would require limited use of certain hazardous materials for routine daily operations and maintenance that could be relatively similar or slightly increased compared to existing conditions with the proposed expansion. Accidental release of such materials could include fuels, paints, coatings, lubricants, and oils, which would result in water quality degradation if the materials were to become entrained in

stormwater. This would result in a potentially significant impact on water quality. However, compliance with existing regulations that would require the project proponent to prepare and implement an updated HMBP, which would minimize this impact by ensuring safe handling of hazardous materials on site, and providing for cleanup in accordance with spill response measures contained within the SWPPP in the event of an accidental release.

The proposed project would not include the creation of new impervious surfaces on the project site, but would include both a liner system and drainage control features consistent with the criteria and objectives stated in Title 27 CCR, Sections 20310(a-g), 20320, and 21600(b)(4)(AE) and 21760(a). The waste materials would be placed over the liner system which includes a leachate collection layer and contained through use of an intermediate cover, as necessary, until capacity is reached when a final cover system is constructed. Therefore, while not considered an impervious surface in the traditional sense (i.e., paved surfaces, sidewalks, and structures), it would effectively be impervious below the bottom of the WMU and upon full capacity, the final cover would be designed to minimize infiltration consistent with Title 27 CCR. The runoff from the relatively impervious intermediate and final covers would still be managed onsite consistent with Title 27 CCR, Sections 21600(b)(8)(F), 21090(a)(3)(B), 21090(c)(4) and 21790(b)(8)(D) which detail requirements for the drainage and erosion controls for the proposed WMUs. The surface water drainage system for the proposed WMUs would be designed to contain runoff from a 24-hour 1,000-year storm event thus preventing safety hazards and minimizing exposure of the waste. The drainage system is designed to prevent ponding, safety hazards, and exposure of waste from the design event through such measures as including concrete lined drainage channels around the perimeter of each WMU to ensure stormwater is conveyed away from the landfill footprint.

The existing Facility is already adhering to the following permits:

- Waste Discharge Requirements (WDR) Order No. 96-094; adopted on April 30, 1996 by the RWQCB, Central Valley Region.
- Waste Discharge Requirements (WDR) Order No. R5-2012-0111; adopted on November 29, 2012 by the RWQCB, Central Valley Region.
- State Water Resource Control Board, General Storm Water Discharge Permit. No.5F15S017429

The proposed project would be required to update these existing permits for the proposed expansion WMUs to ensure that operations do not result in adverse effects due to offsite discharges.

Operations would be required to perform surface water monitoring as currently occurring at the Facility to ensure that all runoff managed in a manner that minimizes offsite discharges and protects water quality. Therefore, all stormwater runoff would be managed in accordance with the requirements of Title 27 CCR as well as the above mentioned WDRs and General Storm Water Discharge Permit to ensure that there is no violation of water quality standards or waste discharge requirements. Thus, the potential impacts related to water quality would be less than significant.

Groundwater

As noted above, the proposed project would be required to adhere to Title 27 CCR requirements which include measures to protect groundwater quality. Each WMU would be required to initially construct a liner system prior to placement of waste materials. The liner system would consist of a layer of bentonite (a type of absorbent clay that when wetted is an extremely low permeability) sandwiched between two geotextiles;

a synthetic liner consisting of thick (60 millimeters) of high density polyethylene (HDPE); a drainage layer; and then a protective soil cover to protect the synthetic liner components. The waste materials would then be placed on the protective soil cover. Pumped leachate may be used for dust control in active, lined new Class II landfill areas, stored in lined on-site surface impoundment WMU 31 for evaporation, or disposed of at an appropriate off-site facility consistent with applicable regulatory requirements.

Title 27 CCR also requires a separation of at least 5 feet between the lowest point within the WMUs and the highest recorded groundwater elevation. According to an evaluation of the hydrogeology of the project and proposed design plans of the project, the lowest point in WMU 36 is at an elevation of approximately 307 feet and the highest groundwater elevation is approximately 223 feet, resulting in a separation of approximately 84 vertical feet. WMU 37 is calculated to have a separation of approximately 69 vertical feet while for WMU 38 the separation would be approximately 72 vertical feet. Therefore, all three proposed WMU would easily meet the Title 27 CCR for groundwater separation which is designed to protect groundwater quality in the unlikely event that the liner system allows any leachate to pass through. Further protection of groundwater is managed through implementation of a groundwater monitoring system which would be included as part of project operations. The groundwater monitoring system has already been designed for the proposed project by a registered geologist licensed in the State of California, in accordance with Title 27 CCR, Section 20415(e)(1). A Groundwater Monitoring Plan for the proposed Class II landfill units is included as part of the system to ensure continued integrity of the system and that waste materials are not adversely affecting groundwater. In the event of any detection of system failure or waste or leachate in the monitoring facilities, notice would be given to RWQCB, local enforcement agency, and water users downgradient of the Facility consistent with the protocols in the Groundwater Monitoring Plan.

Therefore, the proposed designs of the WMUs combined with the implementation of the liner system, leachate collection system, and groundwater monitoring program would ensure that groundwater quality is protected and the potential impacts related to groundwater quality would be less than significant.

Mitigation Measures

MM 4.10-1: Prior to issuance of a grading permit or building permit, the project proponent/operator shall submit an updated Stormwater Pollution Prevention Plan (SWPPP) for review and approval by the Kern County Planning and Natural Resources Department and/or Kern County Public Works Department. The SWPPP shall be designed to minimize runoff and shall specify best management practices to prevent all construction pollutants from contacting stormwater, with the intent of keeping sediment or any other pollutants from moving offsite and into receiving waters. The requirements of the SWPPP shall be incorporated into design specifications and construction contracts.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.10-1, impacts would be less than significant.

Impact 4.10-2: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

The project area is located within the Kern County Subbasin of the San Joaquin Groundwater Basin. The Subbasin is considered a high priority basin according to SGMA and in critical overdraft condition. The Kern Groundwater Authority is the identified GSA and has prepared a draft GSP as required by SGMA. The GSP is aligned with the district boundaries of member water districts and their respective Management Area Plans. The project site is located within the Westside District Water Authority's Management Area Plan through an agreement with the Belridge Water Storage District.

Operational use of water for the Facility would include dust suppression, employee consumption, showers, bathrooms, and laboratory use which would be provided by the Facility water supply system. The existing potable water system consists of a 10,000-gallon tank which is filled with potable water that is trucked to the Facility. Drinking water is currently supplied by bottled water. There is also an existing onsite well that is currently used for non-potable purposes such as dust control, construction and truck washout needs and fire-related emergencies.

The proposed project is expected to increase Facility water demands due to the temporary increase of employees. The amount of potable water use increase would vary day to day; however, this temporary increase is expected to be minor compared to existing water demands. During landfill operations, potable water use at the Facility is expected to change only minimally over existing conditions, with the addition of just two new personnel.

The amount of groundwater needed for non-potable water uses would vary day to day, dependent on the construction activity, and amount and type of waste delivered to the Facility. The water supply assessment prepared for the project conservatively estimated that the project would require approximately an additional 1.756 million gallons (5.4 acre-feet (af)) monthly or approximately 21 million gallons (64.7 af) per year (Appendix K).

Construction of the new WMUs is projected to take approximately nine months. Approximately 0.8 million gallons (2.4 af) are used monthly during construction of a WMU (Appendix K). Therefore, the proposed project would require approximately an additional 0.8 million gallons (2.4 af) monthly for nine months for a conservative total of 7.2 million gallons (22.1 af) during the time period that a new WMU is under construction.

The draft GSP for the subbasin indicates a preliminary water supply allocation of 0.144 af per acre of land, although the allocation is not currently enforced, and the allocation does not include the potential to increase the yield with projects that make more groundwater available in the future. The timing of when an allocation based on acreage will be enforced is currently unknown but will occur sometime in the future (Appendix K). However, an allocation of 0.144 af per acre equates to 46.08 af per year (afy) for current operations, and 92.16 afy for future operations based on land areas of 320 and 640 acres each, respectively, which would fall short of the current and project operational demands of 64.7 afy and 129.4 afy, respectively. Construction provides an additional short-term annual demand if the preliminary pumping allocation is enforced. Although, with the 1,015 total acreage owned by the project proponent within the Subbasin, the 0.144 af per acre allocation would amount to 146.16 af, which would be more than enough for the normal operational demands associated with the project and only amount to a shortfall of approximately 5 af during construction years of the proposed project, a relatively small amount to make up through either conservation or obtaining a transfer from the nearby West Kern Water District.

Therefore, the proposed project would require increases in water demands from 64.7 af per year to an estimated total of 129.4 af per year during operation and up to 151.5 af per year during construction years. However, compared to the total pumping occurring in the subbasin which is estimated at 1.59 million af per year, it is a very small percentage of the extraction occurring. Pumping allocations are not currently being enforced but may in the future. The allocations would be based on property owner acreage and the project proponent appears to be able to meet the vast majority of the estimated highest demand periods (i.e., construction years) assuming the preliminary allocation of 0.144 af per acre. Therefore, the potential impacts related to groundwater supplies would be considered less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.10-3: The project would not 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 result in substantial erosion and/or sedimentation on-site or off-site.

As discussed above in Impact 4.10-1, current drainage patterns at the project site are managed in accordance with Title 27 CCR. Stormwater runoff is internally managed at the Facility and monitored in accordance with the current SWPPP for existing operations. Operations of the proposed project be required to implement similar drainage control requirements which would include measures to minimize erosion or sedimentation. The proposed project would not include the creation of new impervious surfaces on the project site, but would include both a liner system and drainage control features consistent with the criteria and objectives stated in Title 27 CCR, Sections 20310(a-g), 20320, and 21600(b)(4)(AE) and 21760(a). The final cover system would be relatively impervious and would also be designed consistent with Title 27 CCR. The runoff would be managed onsite consistent with Title 27 CCR, Sections 21600(b)(8)(F), 21090(a)(3)(B), 21090(c)(4) and 21790(b)(8)(D) which detail requirements for the drainage and erosion controls for the proposed WMUs. Therefore, the potential impact related to erosion and sedimentation would be considered less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.10-4: The project would not 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 substantially increase the rate or amount of surface runoff which would result in flooding on- or off site.

The proposed new WMUs are located in the northern portion of the project site, bounded by WMU 33 on the west and south, WMU 28 on the south and WMUs 18, 21, 22, 23, and 27 on the east. Based on the existing FIRM, a portion of the proposed WMUs are located within the existing designated 100-year SFHA flood zone. However, a re-evaluation of the 100-year floodplain using updated topographic information and more detailed hydrologic and hydraulic methods was performed for the site in a floodplain study. The floodplain study estimated the 100-year floodplain extents for Adobe Canyon Creek in the vicinity of the project site for existing topographic conditions and also under the proposed grading conditions with the project. The existing floodplain extents are based on an April 2015 topography originally obtained from the Facility. The proposed floodplain was estimated based on the liner grading plans for WMU 37 and WMU 38 located in the northwest corner of the site near the designated 100-year flood zone. Based on this study, the revised 100-year floodplain would be located outside of the proposed WMUs.

Prior to commencement of the proposed project, a Conditional Letter of Map Revision (CLOMR) would be submitted to FEMA to approve the proposed modifications to the SFHA based on the results of the floodplain study. Upon FEMA approval of the CLOMR, the County would request a revision to the FIRM in the form of a Letter of Map Revision (LOMR) to reflect the revised conditions.

In addition, as discussed above, the proposed project would be required to adhere to the drainage control measures as part of Title 27 CCR, Sections 21600(b)(8)(F), 21090(a)(3)(B), 21090(c)(4) and 21790(b)(8)(D). Conformance with Title 27 CCR would require that the proposed drainage features of the project can contain up to a 24-hour the 1,000-year design storm event.

Therefore, the proposed grading plans would alter the existing 100-year flood zone boundaries to be located outside of the proposed WMUs. The proposed drainage features, consistent with Title 27 CCR requirements, would be designed to contain up to the 24-hour 1,000-year storm event where the majority of storm flows would be contained and managed onsite. As a result, the proposed drainage changes associated with the project would have a less than significant impact related to flooding on- or off-site.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.10-5: The project would not 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.

The project site is located in a remote, rural region with no existing or planned stormwater infrastructure. As described above, the project would be required to adhere to Title 27 CCR drainage control requirements as well as any applicable Kern County Public Works Department storm water requirements. Adherence to these regulatory requirements would address stormwater controls on both management of runoff volume and water quality, including controlling erosion and protection of water quality of stormwater runoff. With drainage features designed to capture the 24-hour 1,000-year event, the majority of stormwater flows would be contained onsite. As a result, the project would not exceed the capacity of any existing or planned infrastructure the potential impact related to drainage system capacities or additional sources of polluted runoff would be considered less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.10-6: The project would not contribute to inundation by a flood hazard, tsunami, or seiche zones, that would result in risk of release of pollutants.

As discussed more thoroughly in Section 4.9, *Hazards and Hazardous Materials*, the project would not include the use, storage, or disposal of significant quantities of hazardous materials. The liner system and leachate collection system would be constructed and operated in accordance with Title 27 CCR requirements which include measures to ensure that water contact with the waste materials is minimized and otherwise managed in a manner that contains pollutants and minimizes releases. In addition, the project site is located well inland and far from the ocean or any enclosed or semi-enclosed water body such that there would be no potential threat from tsunami or seiche hazards. Therefore, based on the characteristics of the project and the location, the project would have a less than significant potential to release pollutants from flooding, tsunamis, or seiche waves.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.10-7: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

As noted above, the project site is located within the Central Valley RWQCB and is subject to the applicable policies and requirements of the Basin Plan administered by the RWQCB in accordance with the Porter-Cologne Water Quality Control Act. There is an existing SWPPP that has been prepared for the current Facility operations which would be updated to include the proposed project activities pursuant to NPDES requirements. As noted above, project grading and construction activities associated with each WMU would be subject to erosion control requirements in accordance with applicable Title 27 CCR and NPDES requirements related to water quality. Therefore, with adherence to these regulatory requirements, the project would not conflict with or obstruct implementation of any water quality control plan.

The project site is located in the Kern County Subbasin where the Kern Groundwater Authority, as the identified GSA, has prepared a draft GSP as required by SGMA. As discussed above, in Impact 4.10-2, the proposed project is expected to increase Facility water demands which would vary according to whether it is a normal operational year or whether it is a year of construction of one of the proposed 3 WMUs. The draft GSP for the subbasin indicates a preliminary water supply allocation of 0.144 af per acre of land, although not currently enforced. Assuming this allocation rate, the 1,015 total acreage owned by the project proponent within the Subbasin, the 0.144 af per acre allocation would amount to 146.16 af, which would be more than enough for the normal operational demands associated with the project and only amount to a shortfall of approximately 5 af during construction years of the proposed project, a relatively small amount to make up through either conservation or obtaining a transfer from the nearby West Kern Water District.

Therefore, the proposed project would require increases in water demands from 64.7 af per year to an estimated total of 129.4 af per year during operation and up to 151.5 af per year during construction years. The current estimated allocations would be sufficient to provide all project water demands during operational demands and only fall short of construction year demands of 5 af (Appendix K). This relatively small shortfall could be made up through either conservation or additional purchases which would not conflict with the GSP. Therefore, the potential impacts related to conflicts or obstructions with sustainable groundwater management plans would be considered less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

The geographic scope considered for the cumulative analysis is the San Joaquin River Basin for surface water and the Kern County Groundwater Subbasin for groundwater. As described in Chapter 3, *Project Description*, of this EIR, include projects within a 6-mile radius of the proposed project. These projects consist primarily of conditional use permits as well as a Habitat Conservation Plan. The related projects

listed in Table 3-8, *Cumulative Projects List*, all reside in a somewhat smaller geographic scope than the scope considered for cumulative analysis for Hydrology and Water Quality, but this smaller area is likely representative of the more rural areas of the hydrological unit as a whole.

With regard to water supply, the cumulative scenario projects may not have any new water demands associated with them but even so, would be required to adhere to the eventual enforcements of the Kern County Subbasin GSP as applicable. Therefore, the incremental water use of the project, along with the other cumulative projects, would not result in a significant cumulative impact to the subbasin. Hence, cumulative impacts related to water supplies are less than significant.

As discussed above Mitigation Measure MM 4.10-1 would require the project to implement a SWPPP and associated BMPs to minimize the potential for the release of pollutants and sediment into surface water. Additionally the project applicant is required to prepare and submit an updated HMBP, that would delineate hazardous material and hazardous waste storage areas; describe proper handling, storage, transport, and disposal techniques; describe methods to be used to avoid spills and minimize impacts in the event of a spill; describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction; and establish public and agency notification procedures for spills and other emergencies, including fires. Other cumulative scenario projects would be required to implement similar measures as a part of the CEQA and permitting review process, as applicable. Therefore, cumulative scenario impacts associated with water quality degradation would not be cumulatively considerable, and the project would not contribute to a cumulative impact on water quality.

With respect to erosion, drainage, and flooding, the project would include required drainage control measures, which would minimize direct impacts on erosion, drainage, and flooding. Other cumulative scenario projects may not include any earthwork activities or involve construction of improvements that alter drainage patterns. However, any potential changes to drainage patterns would be required to implement similar measures, in order to minimize erosion, drainage, and flooding related impacts. Additionally, drainage related impacts from cumulative scenario projects would be primarily localized. Therefore, cumulative scenario impacts on erosion, drainage, and flooding are not anticipated to be cumulatively considerable, and the project would not contribute to a cumulative impact on flooding, erosion, or drainage.

Mitigation Measures

With implementation of Mitigation Measure MM 4.10-1, impacts would be less than significant.

Level of Significance

Cumulative impacts would be less than significant.

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4.11.1 Introduction

This section of the EIR describes the affected environment and regulatory setting of the project for impacts that may affect land use and planning. It also describes the environmental and regulatory setting and discusses the need for mitigation measures where applicable. The information in this section is based primarily, but not exclusively, on a review of the project's consistency with the Kern County General Plan and the Kern County Zoning Ordinance.

4.11.2 Environmental Setting

The proposed project is situated in the southern San Joaquin Valley in Kern County, California; refer to **Figure 3-1, Project Vicinity Map**. The 640-acre project site is located in central Kern County at 2500 West Lokern Road, Buttonwillow, CA, approximately 8 miles west of Buttonwillow, on the northern side of Lokern Road, on Assessor's Parcel Numbers (APNs) 099-290-17 and 099-261-32. The project site is located in Sections 15 and Section 16 of Township 29 South, Range 22 East, of the Mount Diablo Base and Meridian (MDB&M).

Onsite Land Uses

The existing Clean Harbors Buttonwillow Facility (Facility) occupies the western half of the project site. The Facility is a Class I hazardous and Class II non-hazardous commercial waste management Facility that accepts solid, semi-solid, and liquid, hazardous and non-hazardous wastes for treatment, storage, or disposal. The Facility is permitted, by Conditional Use Permit (CUP) No. 4, Map 97 to accept, treat, store, transfer, and dispose both non-hazardous and hazardous wastes that are not land-banned. As such, the Facility will continue to accept non-hazardous, RCRA, and non-RCRA hazardous, solid, liquid, and sludge wastes in both bulk and containers. Land use authorizations for the Facility were originally approved by the Kern County Board of Supervisors in 1982. Modifications to CUP 4, Map 97 were approved on December 12, 1994, November 30, 2004, July 13, 2010, and December 16, 2014, by both the Kern County Planning Commission and Kern County Board of Supervisors.

The Facility was granted a Hazardous Waste Facility Permit by the Department of Toxic Substances Control (DTSC) and the U.S. Environmental Protection Agency (EPA) in May 1983 and October 1984, respectively. The Hazardous Waste Facility Permit was renewed in 1996. On April 6, 2006, the DTSC Hazardous Waste Facility Permit expired but is continued in accordance with regulatory requirements.

The eastern half of the project site is vacant land. A plugged and abandoned oil and gas well, and four groundwater monitoring wells are located on the eastern half.

As shown in **Figure 4.11-1, Existing Kern County General Plan Designations Map**, and **Table 4.11-1, Project Site and Surrounding Land Use**, the project site is located within unincorporated Kern County and within the administrative boundaries of the Kern County General Plan. The project site falls within three

land use designations of the Kern County General Plan: much of the area is designated as 3.4 (Solid Waste Facility), while the northwestern portion of the property is designated as 3.4 /2.5 (Solid Waste Facility–Flood Hazard) and the buffer parcel is currently zoned 8.3 (Extensive Agriculture, min. 20-acre parcel size).

The 3.4 General Plan land use designation applies to existing or planned public, semi-public, or private municipal solid waste facilities, organic waste disposal facilities, and segregated waste stream disposal sites. The 8.3 General Plan land use designation applies to agricultural uses involving large amounts of land with relatively low value per acre yields. Typical uses include livestock grazing, farming and woodlands. The minimum allowable parcel size in the 8.3 category is 20-acres gross, except lands subject to a Williamson Act Contract/Farmland Security Zone Contract, in which case the minimum parcel size is 80-acres gross.

As shown in **Table 4.11-1, Project Site and Surrounding Land Use**, below, and in **Figure 4.11-2, Existing Zoning Classification Map**, of this EIR, the project site is located within the A (Exclusive Agriculture) Zone District. Hazardous waste facilities are permitted in the A Zone District with a Conditional Use Permit; however, a change in zoning to M-3 (Heavy Industrial) is being proposed for this project as the M-3 Classification is more indicative of both current and proposed activities at the project site.

The project site is located within Kern County Agricultural Preserve No. 2 boundary, as is the standard practice in Kern County for any land that is zoned A (Exclusive Agriculture). No lands within the project site are subject to a Williamson Act Land Use contract (see Section 4.2, Agriculture and Forest Resources).

TABLE 4.11-1: PROJECT SITE AND SURROUNDING LAND USES

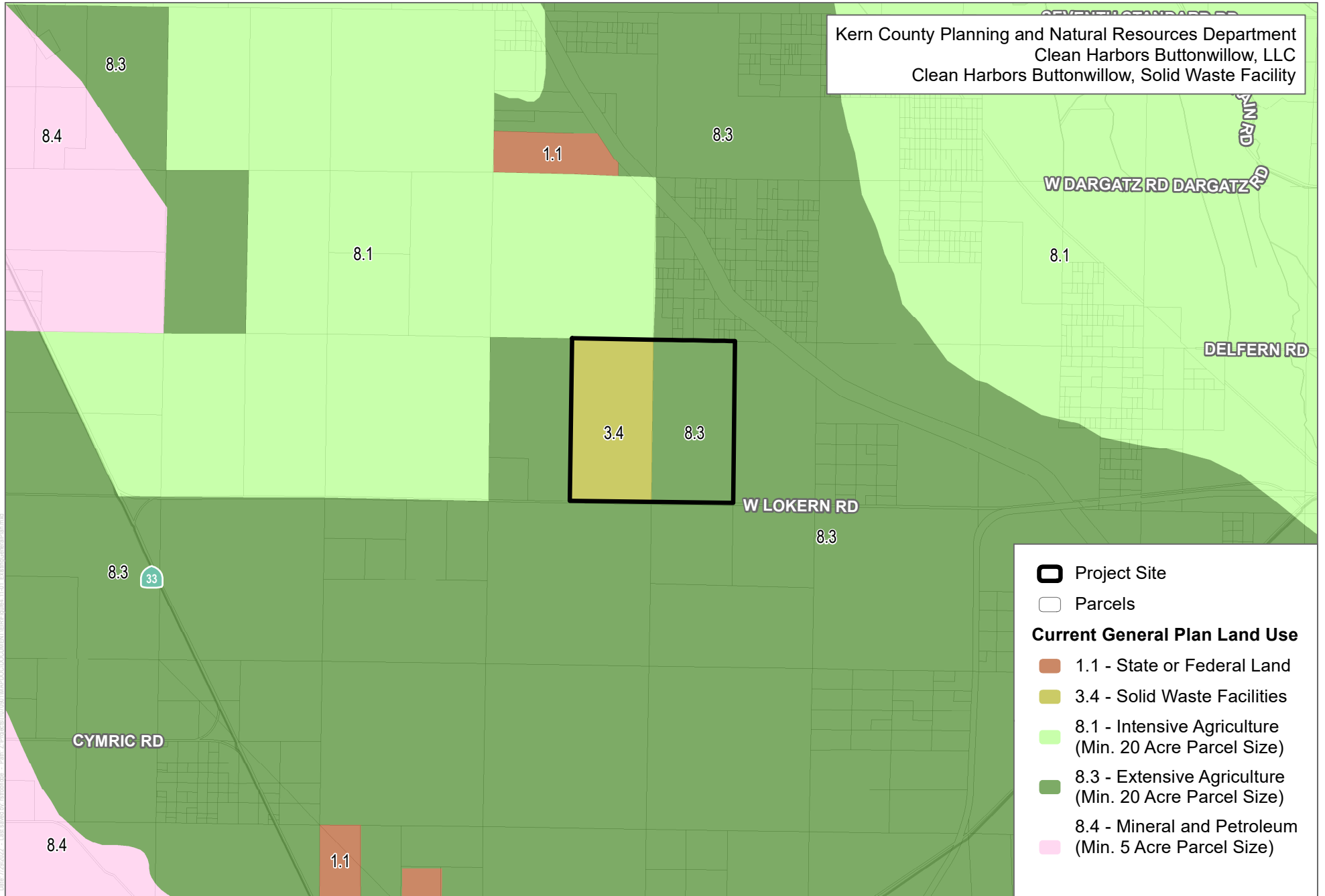
Direction	Existing Land Use	Existing Map Code Designation	Existing Zoning Classifications
Project Site APN 099-290-17	Entirely developed with Commercial Landfill Facility (315.95 acres)	3.4 (Solid Waste Disposal Facility) 3.4/2.5 (Solid Waste Disposal Facility/ Flood Hazard)	A (Exclusive Agriculture)
Project Site APN, 099-261-	Undeveloped, open space (318.45 acres)	8.3 (Extensive Agriculture - min. 20-acre parcel size)	A (Exclusive Agriculture)
North	Farming Crops (Pistachios, alfalfa) and high desert vegetation	8.1 (Intensive Agriculture , 20 acre min); 8.3/2.5 (Extensive Agriculture, 20 acre min, Flood Hazard); 8.3 (Extensive Agriculture, 20 acre min);	A (Exclusive Agriculture)
South	Oil and Gas Production and Undeveloped Desert Land	8.1/2.5(Intensive Agriculture , 20 acre min, Flood Hazard) 8.3 (Extensive Ag, 20 acre min)	A (Exclusive Agriculture)
East	LoKern Road, Oil and Gas Production and Undeveloped Desert Land	8.1 (Intensive Agriculture , 20 acre min); 8.3/2.5 (Extensive Agriculture, 20 acre min, Flood Hazard); 8.3 (Extensive Agriculture, 20 acre min);	A (Exclusive Agriculture)
West	Oil and Gas Production and Undeveloped Desert Land	8.1 (Intensive Agriculture , 20 acre min) 8.3 (Extensive Ag, 20 acre min); 8.3/2.5 (Extensive Agriculture, 20 acre min, Flood Hazard);	A (Exclusive Agriculture)

Surrounding Land Uses

As described in **Table 4.11-1, *Project Site and Surrounding Land Uses***, above, surrounding land uses are composed primarily of oil and gas production and agriculture. The area surrounding the Facility is zoned exclusively for agriculture and falls within an Agricultural Preserve No. 2. Land use immediately adjacent to the Facility consists of irrigated agricultural to the north, a solar energy plant to the northeast, and completely undeveloped land to the south and west. Irrigated agriculture and oil production activities are the predominant land uses surrounding the Facility for several miles. Four private water wells are located off site, northeast of the Facility. The California Aqueduct is located off site approximately ½ mile northeast of the Facility's northern property line. The nearest populated areas are the unincorporated communities of Buttonwillow and Lost Hills, approximately 8 miles to the east and 15 miles to the north, respectively. The nearest residential area is located approximately 2.5 miles northeast of the project site. The Elk Hills-Buttonwillow Airport is located approximately 8 miles southeast of the project site.

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Kern County Planning and Natural Resources Department
 Clean Harbors Buttonwillow, LLC
 Clean Harbors Buttonwillow, Solid Waste Facility



SOURCE: NAIP 2018, Kern County 2018

2022

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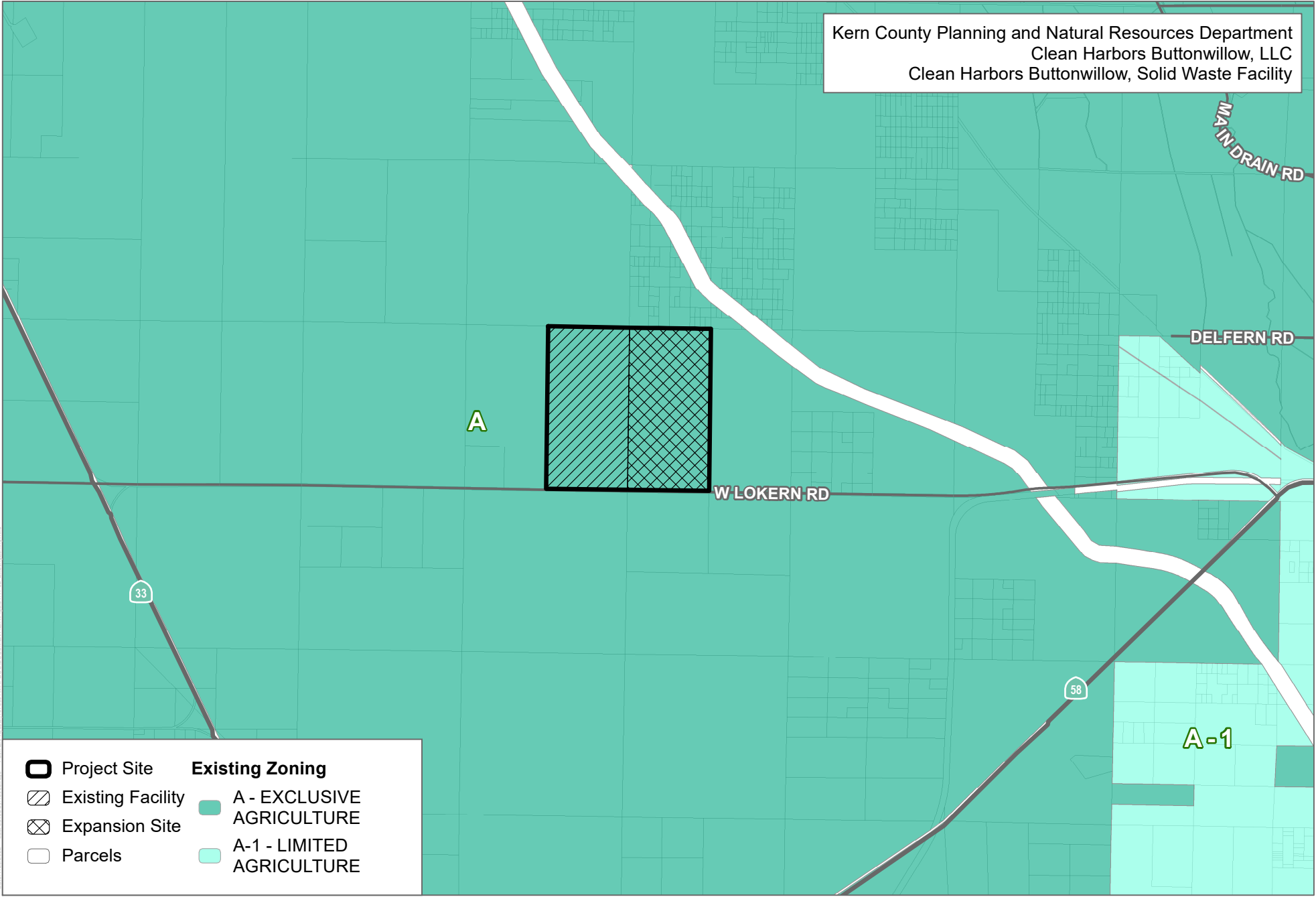
FIGURE 4.11-1

Existing Kern County General Plan Designations Map

Clean Harbors

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Kern County Planning and Natural Resources Department
 Clean Harbors Buttonwillow, LLC
 Clean Harbors Buttonwillow, Solid Waste Facility



Project Site	Existing Zoning
Existing Facility	A - EXCLUSIVE AGRICULTURE
Expansion Site	A-1 - LIMITED AGRICULTURE
Parcels	

SOURCE: NAIP 2019, Kern County 2019

2022

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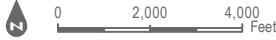


FIGURE 4.11-2
 Existing Zoning Classification Map

Clean Harbors

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4.11.3 Regulatory Setting

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is the federal statute that regulates facilities that treat, store, or dispose of hazardous waste. RCRA gives the Environmental Protection Agency (EPA) the authority to control hazardous waste from “cradle-to-grave.” This includes the generation, transportation, treatment, storage and disposal of hazardous waste. To achieve this, EPA develops regulations, guidance and policies that ensure the safe management and cleanup of solid and hazardous waste, and programs that encourage source reduction and beneficial reuse. The regulations governing hazardous waste identification, classification, generation, management and disposal are found in title 40 CFR parts 260 through 273.

State

Department of Toxic Substances Control

DTSC issues hazardous waste Facility permits to any person who stores, treats, or disposes of hazardous waste as described in the Hazardous Waste Control Laws in the Health and Safety Code, Division 20, Chapter 6.5. California has a five-tiered permitting program which matches the statutory/regulatory requirements imposed upon each category of hazardous waste Facility to the degree of risk posed by the Facility. The Clean Harbors Buttonwillow Facility is within the full permit tier, which includes all facilities requiring a RCRA permit, plus selected non-RCRA activities pursuant to Title 22 CCR.

CalRecycle

The California Department of Resources Recycling and Recovery (CalRecycle) issues Solid Waste Facilities Permits (SWFPs) that govern all aspects of landfill operational and closure activities. Some of the subjects governed by SWFPs include maximum daily tonnage, types of materials accepted for disposal, and landfill closure plans, including complete/final, partial, or clean closure activities. The Kern County Department of Environmental Health is the Local Enforcement Agency (LEA) that is responsible for providing regulatory oversight of solid waste handling activities, including inspections, and both agencies are required to review and approve changes to the existing SWFP.

Local

Land use and planning decisions within and adjacent to the project site are guided and regulated by the Kern County General Plan and Kern County Zoning Ordinance. The Kern County General Plan contains goals, objectives, and policies and provides an overall foundation for establishing land use patterns. The Kern County Zoning Ordinance contains regulations through which the General Plan’s provisions are implemented. The most relevant regulations pertaining to development of the proposed project are presented below.

Kern County General Plan

The Kern County General Plan is a policy document designed to provide long-range guidance for planning decisions that affect the growth and resources of unincorporated Kern County. Included in the Kern County General Plan is the Land Use, Open Space, and Conservation Element, which provides for a variety of land uses for future economic growth while also assuring the conservation of Kern County’s agricultural, natural, and resource attributes. Within the Land Use, Open Space and Conservation Element, policy areas are separated by overlay designations, known as “Map Codes”, which are identified on the Kern County General Plan maps for each section of the County and include the following categories: (1) non-jurisdictional land (State and federal); (2) environmental constraints overlay; (3) public facilities; (4) non-jurisdictional land (accepted county plan areas, rural communities and specific plan required); (5) residential; (6) commercial; (7) industrial; and (8) resource.

According to the Kern County General Plan, the project site is located within Map Codes 3.4 (Solid Waste Disposal Facility) and 8.3 (Extensive Agriculture - 20-acre min). Each Map Code area contains specific goals, policies, and implementation measures to guide development within them.

In addition to the Land Use, Open Space, and Conservation Element, the Kern County General Plan includes other elements related to circulation, noise, and energy. Each element establishes goals, policies, and implementation measures that guide planning decisions in unincorporated Kern County. The goals, policies, and implementation measures relevant to the project are listed below.

1. Land Use, Open Space, and Conservation Element

1.3 Physical and Environmental Constraints

Goal

Goal 1: To strive to prevent loss of life, reduce personal injuries, and property damage, minimize economic and social diseconomies resulting from natural disaster by directing development to areas which are not hazardous.

Policies

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

Policy 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

Measure D: Review and revise the County’s current Grading Ordinance as needed to ensure that its standards minimize permitted topographic alteration and soil erosion while maintaining soil stability.

Measure F: The County will comply with the Colbey-Alquist Floodplain Management Act in regulating land use within designated floodways.

Measure H: Development within areas subject to flooding, as defined by the appropriate agency, will require necessary flood evaluations and studies.

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.

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.

1.4 Public Facilities and Services

Goals

Goal 1: Kern County residents and businesses should receive adequate and cost effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.

Goal 5: Ensure that adequate supplies of quality (appropriate for intended use) water are available to residential, industrial, and agricultural users within Kern County.

Goal 10: Ensure landfill capacity for Kern County residents and industries.

Map Provisions: Public Facilities and Services

Map Code 3.4

(Solid Waste Disposal Facility:

Existing or planned public, semi-public, or private municipal solid waste facilities, organic waste disposal facilities, and segregated waste stream disposal facilities. (see Appendix E)

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 6: The County will ensure adequate fire protection to all Kern County residents.

Policy 7: The County will ensure adequate police protection to all Kern County residents.

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

Policy 9: Applicants for all solid waste disposal facilities (Map Code 3.4) and other waste facilities (Map Code 3.7) shall submit closure plans and financial assurance estimates to guarantee closure in conjunction with approval of the required conditional use permit. The requirement for financial assurances may also be satisfied if a State or federal agency will have lead permit responsibility for approval or operational oversight of the facility and which also will require the posting of financial assurances to guarantee site closure. In conjunction with the financial assurances filed with the County, applicants shall enter into a contract with the County to guarantee site closure.

Policy 10: A designated site for solid waste disposal facilities (Map Code 3.4) shall be protected from encroachment of incompatible land uses and intensive urban development. General Plan map code designations which may be compatible for properties adjacent to or within 1,320 feet of solid waste disposal facilities include the following: Resource designations (8.x), 1.2, 3.3, 5.8, 7.1, 7.2, and 7.3. Other map code designations may be compatible subject to project-specific CEQA evaluation. Intensive residential uses, community care facilities, schools, hospitals, recreational vehicle parks, and other uses involving sensitive populations, concentrations of people, and other activities will usually be incompatible adjacent to or near solid waste disposal facilities.

Health risk assessment analysis prepared by the land use project applicants may be warranted when considering proposals for General Plan amendments, zone 23 changes, conditional use permits, and sensitive uses within 1,320 feet of a designated solid waste facility site.

Policy 11: A solid waste disposal facility (Map Code 3.4) and other waste facilities (Map Code 3.7) shall pay its pro-rata share of upgrading of pertinent County roads.

Policy 12: For solid waste disposal facilities, all necessary permits shall be obtained from the Kern County Environmental Health Services Department, Kern County Waste Management Department, State of California Integrated Waste Management Board, State of California Regional Water Quality Control Board, the appropriate Air Pollution Control District, and all other responsible agencies prior to the commencement of operations.

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

Policy 14: All solid waste disposal facilities shall designate a buffer around the permitted disposal area as defined by the Map Code 3.4 land use designation.

Policy 16: The proposed siting or expansion of hazardous waste facilities will be conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan.

Implementation Measures

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.

Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.

Measure D: Involve utility providers in the land use and zoning review process.

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.

Measure M: Conditional use permits shall be required for solid waste facilities to establish the standards and conditions necessary to protect the public's health and safety and to protect characteristics associated with diverse communities and regions of Kern County.

Measure N: Secure complete and accurate information on all hazardous wastes generated, handled, stored, treated, transported, and disposed of within or through Kern County.

Measure S: County permits for new or expanding hazardous waste disposal facilities shall be approved for a period not to exceed five (5) years. No renewal of a permit will be granted if federal or State law or regulations do not then authorize the issuance of permits to operate new disposal facilities of the proposed type. If the County renews a permit, it may impose any new conditions and restrictions, which are required to bring the permit into conformity with law or the Kern County and Incorporated Cities Hazardous Waste Management Plan.

Measure U: Each adopted site for a solid waste disposal facility (Map Code 3.4) shall be depicted on the General Plan map and on a map in Appendix E, delineating the boundaries of the facility and existing permanent dwelling units within 1,320 feet of the facility's boundary. Modifications to a permitted disposal area shall require a General Plan Amendment to a Map Code 3.4 for the expansion area and shall simultaneously amend the Map Code 3.4.1 (Other Waste Facility Buffer) boundary to maintain a 1,320-foot buffer area from the permitted disposal area. The General Plan Amendment process shall include amending the facilities map in Appendix E.

Measure V: All new solid waste disposal facilities (non-hazardous) (Map Code 3.4) shall own a minimum of 1,320-foot buffer around the permitted operational area as defined by the Map Code 3.4 land use designation and the buffer shall be designated Map Code 3.4.1 (Solid Waste Disposal Facility Buffer). This requirement may be waved or lessened by the Planning Director if adjacent land uses are compatible with the disposal facility such as Heavy and Medium Industrial.

Measure W: Solid waste disposal facilities approved prior to the adoption of this General Plan shall strive to have a 660-foot buffer around the permitted disposal area as defined by the Map Code 3.4 (Solid Waste Disposal Facility) land use designation. Land, which is not owned by the solid waste disposal facility and is within 1,320 feet of a permitted disposal facility, shall include a Map Code 2.10 (Nearby Waste Facility) combining land use designation.

Measure FF: A traffic study/analysis shall be required for all discretionary new or expanded solid waste facilities. The study shall include an analysis of the status of facility access roads and the need to upgrade those roads. Mitigation may be imposed to address impacts to these roads.

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 3: To ensure that the development of resource areas minimizes effects of neighboring resource lands.

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 designation.

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

Policy 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 water system shall be conserved through the use of agricultural zoning with minimum parcel size provisions.

1.10 General Provisions

Goal

Goal 1: Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

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 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 serve the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.

Implementation Measures

Measure E: All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply and Preservation of Environmental Health Rules and Regulations administered by the County's Public Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site specific documentation that characterize the quality of upper groundwater in the alternative septic systems would adversely impact groundwater quality. If the evaluation indicated that the uppermost groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant would be required to supply sewage collection, treatment, and disposal facilities.

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:

- (1) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
- (2) The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.

Policy 20: The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District on ministerial permits.

Policy 21: The County shall support air districts efforts to reduce PM10 and PM2.5 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.

Implementation Measures

Measure F: All discretionary permits shall be referred to the appropriate air district for review and comment.

Measure G: Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:

- a. Minimizing idling time.
- b. Electrical overnight plug-ins.

Measure H: Discretionary projects may use one or more of the following to reduce air quality effects:

- a. Pave dirt roads within the development.
- b. Pave outside storage areas.
- c. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
- d. Use of alternative fuel fleet vehicles or hybrid vehicles.
- e. Use of emission control devices on diesel equipment.
- f. Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces.
- g. Provide bicycle lockers and shower facilities on site.
- h. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
- i. The use and development of park and ride facilities in outlying areas.
- j. Other strategies that may be recommended by the local Air Pollution Control Districts.

Measure J: The County should include PM10 control measures as conditions of approval for subdivision maps, site plans, and grading permits.

1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation

Policy

Policy 25: The County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to residents and visitors.

Implementation Measures

Measure K: Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.

Measure L: The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.

Measure M: In areas of known paleontological resources, the County should address the preservation of these resources where feasible.

Measure N: The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.

Measure O: On a project-specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document.

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 31: Under the provisions of the California Environmental Quality Act, 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 is prepared.

Implementation Measures

Measure Q: Discretionary projects shall consider effects to biological resources as required by CEQA.

Measure R: Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to CEQA.

1.10.6 Surface Water and Groundwater

Policies

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

Policy 41: Review development proposals to ensure adequate water is available to accommodate projected growth.

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

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

Implementation Measure

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; and
- (iii) Encouraging the retrofitting of existing development with water conserving devices.

1.10.7 Light and Glare Policies

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

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

2.1 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.

2.3 Highways

2.3.3 Highway Plan

Goals

Goal 5: Maintain a minimum Level of Service (LOS) D.

2.3.4 Future Growth

Goal

Goal 1: To provide ample flexibility in this plan to allow for growth beyond the 20-year planning horizon.

Policies

Policy 2: The County should monitor development applications as they relate to traffic estimates developed for this plan. Mitigation is required if development causes affected roadways to fall below Level of Service (LOS) D. Utilization of the CEQA process would help identify alternatives to or mitigation for such developments. Mitigation could involve amending the Land Use, Open Space and Conservation Element to establish jobs/housing balance if projected trips in any traffic zone exceed trips identified for this Circulation Element. Mitigation could involve exactions to build offsite transportation facilities. These enhancements would reduce traffic congestion to an acceptable level.

Policy 4: As a condition of private development approval, developers shall build roads needed to access the existing road network. Developers shall build these roads to County standards unless improvements along State routes are necessary then roads shall be built to 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.

2.3.10 Congestion Management Programs

State law requires that urbanized counties prepare an annual congestion management program (CMP). City and county eligibility for new gas tax subventions is contingent upon their participation in the congestion management program. To qualify for funding provided through the State Transportation Improvement Program (STIP) or the Federal Transportation Improvement Program (FTIP), the regional transportation agency must keep current a Regional Transportation Program (RTP) that contains the CMP. Also, the CMP offers local jurisdictions the opportunity to find cooperative solutions to the multi-jurisdictional problems of air pollution and traffic congestion.

The CMP has links with air quality requirements. The California Clean Air Act requires that cities and counties implement transportation control measures (TCMs) to attain, and maintain, the State air quality standard.

Goals

Goal 1: To satisfy the trip reduction and travel demand requirements of the Kern Council of Government's Congestion Management Program.

Goal 2: To coordinate congestion management and air quality requirements and avoid multiple and conflicting requirements.

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.

2.5.4 Transportation of Hazardous Materials

Goal

Goal 1: Reduce risk to public health from transportation of hazardous materials.

Policy

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

Implementation Measure

Measure A: Roads and highways utilized for commercial shipping of hazardous waste destined for disposal will be designated as such pursuant to Vehicle Code Sections 31303 et seq. Permit applications shall identify commercial shipping routes they propose to utilize for particular waste streams.

Chapter 3. Noise Element

3.2 Sensitive Noise Areas

Goals

Goal 1: Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.

Goal 2: Protect the economic base of Kern County by preventing the encroachment of incompatible land uses near known noise producing roadways, industries, railroads, airports, oil and gas extraction, and other sources.

Policies

Policy 1: Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.

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

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

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

Implementation Measures

Measure A: Utilize zoning regulations to assist in achieving noise-compatible land use patterns.

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.

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} .

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.

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.

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.

Chapter 4. Safety Element

4.1 Introduction

Goal

Goal 1: Minimize injuries and loss of life and reduce property damage.

4.2 General Policies and Implementation Measures, Which Apply to More Than One Safety Constraint

Implementation Measures

Measure F: The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by the Federal Emergency Management Agency (FEMA), shall be used as a source document for preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA), evaluation of project proposals, formulation of potential mitigation, and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.

4.3 Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure

Policy

Policy 1: The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.

Implementation Measure

Measure B: Require geological and soils engineering investigations in identified significant geologic hazard areas in accordance with the Kern County Code of Building Regulations.

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.

4.5 Landslides, Subsidence, Seiche, and Liquefaction

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

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

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.

4.9 Hazardous Materials

Goal

Policy 1: The proposed siting or expansion of hazardous waste facilities will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan.

Implementation Measure

Measure A: Facilities used to manufacture, store, and use of hazardous materials shall comply with the Uniform Fire Code, with requirements for siting or design to prevent onsite hazards from affecting surrounding communities in the event of inundation.

Appendix E: Solid Waste Disposal Facilities Guidelines (Map Code 3.4)

Decision Procedure for Siting Solid Waste Disposal Facilities

1. Solid waste disposal facilities shall be designated on applicable General Plan maps or Specific Plan maps as “Solid Waste Disposal Facility” (Map Code 3.4).
 - A. When planning new organic and municipal solid waste disposal facilities the following siting criteria shall apply. All sites for organic and municipal solid waste disposal facilities shall exclude:
 - 4) 100-year floodplain (Map Code 2.5).
 - 5) High groundwater defined for facilities as: Unlined Facilities: 100 feet below proposed depth of refuse. Lined Facilities: 25 feet below proposed depth of refuse.

Kern County Zoning Ordinance

Title 19 of the Kern County Ordinance provides a description of permitted uses for the various zoning classifications within the County. The Zoning Ordinance consists of two primary parts: a Zoning Map that delineates the boundaries of zoning districts; and a Zoning Code that explains the purpose of the districts, specifies permitted and conditional uses, and establishes development and performance standards. The intent of the Zoning Code is to protect public health, safety, and the general welfare of residents and visitors in the County. Together with the Zoning Map, the Zoning Code identifies the particular uses permitted on each parcel of land in the County and sets forth regulations and standards for development to ensure that the policies, goals, and objectives of the General Plan are implemented. In addition to land use regulations, the Zoning Code contains development standards that can lessen a new structure's impacts on a location or area. These standards control the height, setbacks, parking, lot coverage, gross floor area, etc. for new structures. The Zoning Code also regulates which uses are permitted in each of the County's zoning districts to ensure compatibility between land uses. The project site is currently zoned A, Exclusive Agriculture. The project site would be rezoned M-3, Heavy Industrial. Both zone districts are discussed below.

A – Exclusive Agriculture (Chapter 19.12)

Section 19.12.010 Purpose and Application

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.

Section 19.12.030 Uses Permitted with a Conditional Use Permit

H. Waste Facilities

Agricultural green waste composting, except when incidental and accessory to a permitted use and which does not involve the importation of feedstock or bulking agents, except those produced as a normal and incidental part of the agricultural operation and where there is no commercial export of the finished material.

- Animal waste composting, except when incidental and accessory to a permitted
- use which generates animal waste
- Animal waste product processing
- Green-waste collection, recovery, and composting
- Hazardous waste disposal facility
- Nonhazardous oil production and/or oily waste disposal facility
- Nonhazardous oilfield waste treatment or recycling
- Sanitary landfill, private landfill or monofill
- Septage disposal site
- Sewage sludge composting
- Sewage treatment plant

- Soil reclamation or remediation for soils contaminated with nonhazardous materials
- Transfer station, large volume
- Transfer station, small volume
- Waste-to-energy facility

M-3 – Heavy Industrial (Chapter 19.40)

Section 19.40.010 Purpose and Application

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.

Section 19.40.030 Uses Permitted with a Conditional Use Permit

H. Waste Facilities

- Burning of waste-derived fuels when in conjunction with a permitted or conditionally permitted industrial use, except for pre-chipped tires
- Community septic disposal system
- Greenwaste collection, recovery, and composting
- Hazardous waste disposal facility
- Medical waste treatment, fully enclosed
- Nonhazardous oil production and/or oily waste disposal facility
- Nonhazardous oilfield waste treatment or recycling
- Nonhazardous oily or liquid waste treatment or recycling
- Research, development, or testing of alternative fuel burning processes, temporary
- Sanitary landfill, private landfill or monofill
- Septage disposal site
- Septage storage and transfer site
- Sewage treatment plant
- Soil reclamation or remediation for soils contaminated with nonhazardous materials
- Transfer station, large volume
- Waste-to-energy facility

Section 19.40.130 Special Review Procedures and Development Standards

- A. All development in the M-3 District shall comply with the minimum requirements of Chapter 19.80 of this title.

- B. Development in the M-3 District shall comply with the interpretations and provisions of Chapter 19.08 of this title.

Conditional Use Permits (Chapter 19.104)

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 permitted subject to securing a conditional use permit, it shall be approved only if it is consistent with the 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.

Regional Transportation Plan

The latest Regional Transportation Plan (RTP) was prepared by the Kern Council of Governments (COG), and was adopted on August 16, 2018. The 2018 RTP is a 24-year blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. The RTP is updated every four years. It was developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between local, regional, State, and federal agencies. New to the 2018 RTP, California's Sustainable Communities and Climate Protection Act, or Senate Bill (SB) 375, calls for the Kern RTP to include a Sustainable Communities Strategy (SCS) that reduces greenhouse gas (GHG) emissions from passenger vehicles and light-duty trucks by 5 percent per capita by 2020 and 10 percent per capita by 2035 as compared to 2005. In addition, SB 375 provides for closer integration of the RTP/SCS with the Regional Housing Needs Allocation (RHNA) ensuring consistency between low income housing needs and transportation planning.

The intent of the SCS is to achieve the State's emissions reduction targets for automobiles and light trucks. The SCS will also provide opportunities for a stronger economy, healthier environment, and safer quality of life for community members in Kern County. The RTP/SCS seeks to: improve economic vitality; improve air

quality; improve the health of communities; improve transportation and public safety; promote the conservation of natural resources and undeveloped land; increase access to community services; increase regional and local energy independence; and increase opportunities to help shape our community's future.

The COG recently adopted the 2022 RTP/SCS, which includes projects, policies, and strategies to create a blueprint for the region's growth through 2046. The 2018 RTP/SCS included improvements to the transportation system including closures to critical gaps in the network that hinder access to certain parts to the region, as well as the strategic expansion of the transportation system. In addition to new projects that are included in the 2022 RTP/SCS, many projects from the 2018 RTP remain and are now considered committed or at least reasonably foreseeable (i.e., they are in the TIP and are thus included in the No Project scenario). The 2022 RTP/SCS is intended to meet the changing socioeconomic, transportation infrastructure, financial, technological, and environmental conditions of the region.

Kern County's Solid Waste Management Plan

The Solid Waste Management Plan is a comprehensive guide for all solid waste management activities in the County. The plan identifies the existing solid waste generation and disposal facilities in Kern County, estimates future solid waste disposal demand, and identifies programs to meet this future need.

Kern County and Incorporated Cities Hazardous Waste Management Plan

The Kern County and Incorporated Cities Hazardous Waste Management Plan focuses on the siting of hazardous waste disposal facilities, the transport of hazardous waste in the County, protection of water resources from hazardous waste contamination, and public education concerning the use and disposal of hazardous waste.

4.11.4 Impacts and Mitigation Measures

Methodology

The potential impacts associated with the project are evaluated on a qualitative basis through a comparison of the existing land use and the proposed land uses, in consideration of the applicable planning goals identified above. Compliance with the aforementioned policies is illustrated in consistency tables provided in the Project Impacts section below. The change in the land use on the project site is significant if the effect described under the thresholds of significance below occurs as a result of the project. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

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

A project could have a have a significant adverse effect on land use if the project would:

- a. Physically divide an established community;
- b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect;

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

- a. Physically divide an existing community

As detailed in the IS/NOP, the proposed project consists of continued use of an existing Facility, with soil storage occurring on the adjacent vacant parcel. The surrounding area is also largely vacant, with limited agriculture lands located immediately north of the project site. Therefore, the proposed project would not have the ability to physically divide an established community and there would be no impact. No further analysis of this issue was included in this EIR.

Project Impacts

Impact 4.11-1: 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 Kern County General Plan and the Kern County Zoning Ordinance establish land use policies and regulations that are applicable to the project. The proposed project includes a request for land use entitlements to facilitate the continued and expanded use of the non-hazardous solid waste portion of a Facility that was originally approved and has been in operation since 1983. The project proponent is also proposing modification to current operations and renewal of the existing hazardous waste disposal permit. The project modifications include: an expanded permitted disposal area to facilitate the construction and operation of additional non-hazardous waste landfill units and an expanded permitted Facility area to accommodate a soil stockpiles area; an increase to permitted waste disposal capacity for additional non-hazardous waste; an increase to waste truck traffic; the construction and operation of four new hazardous waste tank treatment buildings; and construction and operation of a latex paint recycling building. In addition to proposed modifications to existing uses the project proponent is also seeking renewal of the existing Hazardous Waste Facility Permit for the hazardous waste management operations including the addition of the four new hazardous waste tank treatment buildings required by DTSC. Changes in General Plan Map Code Designation and Zone District Classifications proposed as part of the project are listed in Table 4.11-2, Existing and Proposed Land Uses.

TABLE 4.11-2: EXISTING AND PROPOSED LAND USES

Direction	Existing Land Use	Proposed Land Use	Existing Map Code Designation	Proposed Map Code Designation	Existing Zoning Classifications	Proposed Zoning Classifications
Project Site APN 099-290-17	Entirely developed with Commercial Landfill Facility	Entirely developed with Commercial Landfill Facility	3.4 (Solid Waste Disposal Facility) 3.4/2.5 (Solid Waste Disposal Facility/ Flood Hazard)	No change from existing	A (Exclusive Agriculture)	M-3 (Heavy Industrial)
Project Site APN, 099-261-32	Undeveloped, Open Space	Entirely developed with Commercial Landfill Facility and Landfill Buffer	8.3 (Extensive Agriculture - min. 20-acre parcel size)	3.4 (Solid Waste Disposal Facility)	A (Exclusive Agriculture)	M-3 (Heavy Industrial)

Kern County General Plan

If approved, the project site would be designated as Map Code 3.4 (Solid Waste Disposal Facility) with the northern portion of the already developed landfill parcel being designated as Map Code 3.4/2.5 (Solid Waste Disposal/Flood Hazard). Associated changes would also include an amendment to the Kern County General Plan Appendix E Map, “Clean Harbors Buttonwillow, LLC w/2,000 ft Buffer” to show the current “Clean Harbors” name and revised permitted Facility boundary, with designated buffer property area. As the landfill is an existing use, allowable under both the current and proposed general plan land use designation, the proposed general plan amendment would not introduce a potentially incompatible land use.

Table 4.11-3, *Consistency Analysis with Kern County General Plan Land Use*, presents the project’s consistency with the Kern County General Plan. The table list the goals and policies identified above in the regulatory setting and provides analysis on the project’s general consistency with overarching policies. Additionally, the table provide goals and policies of issue areas that are presented in more detail in other sections of the EIR. As evaluated in detail in Table 4.11-3, the project is consistent with the goals and policies of the Kern County General Plan.

Kern County Zoning Ordinance

As described above, the project is subject to the provisions of the Kern County Zoning Ordinance and as shown in Table 4.11-1, above, and in Chapter 3, Project Description, the Kern County Zoning Ordinance classifies the project site as being within the A (Exclusive Agriculture) Zone District. The project proponent is requesting a change in zone classification from the A Zone District to the M-3 (Heavy Industrial) Zone District for the entire 640-acre project site. The change is Zone District would remain consistent with the proposed General Plan Amendment and would more accurately reflect existing and proposed activities occurring at the site. Due to the nature of the activities in a M-3 Zone District, a 2,000-foot buffer will be designated around the landfill to prevent encroachment of residential or sensitive receptor development.

In addition, the project would require the approval of a modification to CUP 4, Map 97 per Section 19.40.030 H of the Kern County Zoning Ordinance. Modification to the existing CUP include: an increase in the permitted Facility boundary from 320 acres to 640 acres to include the expansion parcel for a soil stockpile area; an increase in permitted disposal area from 160 acres to 193.3 acres for the addition of non-hazardous waste landfill units (WMU 36, 37, 38) within existing Facility boundary; an increase in permitted disposal capacity from 13,250,000 cubic yards to 16,674,000 for the addition of non-hazardous waste landfill units (WMUs 36, 37, 38) within existing Facility boundary; construction of four new hazardous waste treatment buildings (tank treatment buildings) to support modifications proposed in a Hazardous Waste Facility Permit renewal application; and construction of one latex paint recycling building. The Kern County Planning Commission and Board of Supervisors would approve the proposed modifications to CUP 4, Map 97 if all findings listed in Section 19.104.040, Basis of Approval, of the Kern County Zoning Ordinance can be made.

With the Zone Change and CUP modification approvals, the project’s M-3 zone classification would be consistent with current Kern County Zoning Ordinance, which allows for construction and operation of a hazardous waste facility and all ancillary activities with a CUP. As such, with approval of the CUPs, the proposed project would be consistent with applicable land use policies and regulations, and impacts related to consistency with the zoning ordinance would be less than significant.

Kern County Agricultural Preserve No. 2

As described above, the project is subject to the provisions of the Kern County Zoning Ordinance and is currently included within Kern County Agricultural Preserve No. 2 boundary, as is the standard practice in Kern County for any land that is zoned A (Exclusive Agriculture). The permanent development of the project site, as allowed by the M-3 Zone District, would prohibit agricultural activities on the project site. Therefore, to ensure consistency with the M-3 Zone District, the project proposes to exclude the entire 640-acre site from Agricultural Preserve No. 2. As noted in Table 4.2-11, *Existing and Proposed Land Uses*, while the current Facility and proposed expansion area currently have an A (Exclusive Agriculture) Zone District no agricultural activities are occurring in these areas and removal of the project site from Agricultural Preserve No. 2 would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

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 sites. Section 3.10, *Cumulative Projects*, of this EIR discusses cumulative projects near the project. (**Table 3-8, Cumulative Projects List**, in Chapter 3, *Project Description*, lists specific projects considered in the cumulative impact analysis.)

Impact 4.10-2: The project would contribute to cumulative land use and planning impacts.

Implementation of the proposed project, combined with the development of ongoing projects and future industrial projects in the greater project area could potentially result in cumulative impacts associated with land use and planning if these projects collectively conflict with either existing land uses or other future projects in the area. The anticipated impacts of the project in conjunction with cumulative development in the area of the project would result in the loss of open space. However, potential land use impacts require evaluation on a case-by-case basis because of the interactive effects of a specific development and its immediate environment. As described in **Table 4.11-3**, the proposed project would be consistent with the goals and policies of the Kern County General Plan. In addition, with approval of the General Plan Amendment, zone change, and CUP modification, development of the proposed project would be an allowable use that would not conflict with the land use or zoning classification for the project site. Therefore, as proposed the project would be consistent with the goals and policies of the Kern County General Plan and the Kern County Zoning Ordinance and would therefore not contribute to a cumulatively considerable impact regarding land use.

Furthermore, all related projects would be required to separately undergo environmental review on a case-by-case basis in accordance with the requirements of CEQA. Each related project would also be required

to demonstrate consistency with all applicable planning documents governing the project site, including the Kern County General Plan the Kern County Zoning Ordinance, and any applicable Specific Plans. Should potential impacts be identified, appropriate mitigation would be prescribed that would likely reduce potential impacts to less-than-significant levels.

Therefore, the proposed project would not result in a cumulatively considerable impact related to land use with implementation of the mitigation measures included throughout this EIR and approval of the discretionary actions proposed by the project.

Mitigation Measures

No mitigation measures required.

Level of Significance

Cumulative impacts would be less than significant.

Consistency with the Kern County General Plan

Table 4.11-3, *Consistency Analysis with Kern County General Plan Policies for Land Use*, provides summarizes the consistency of the project with all applicable goals and policies of the Kern County General Plan and relevant planning documents that are applicable to the project site.

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
KERN COUNTY GENERAL PLAN 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	Project will maintain hazardous waste facility at an existing site with suitable buffer zones
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	Project site is not susceptible to substantial risk from seismic activity, landslides, groundwater contamination, flood, or other waste facilities. See Chapters 4.7 and 4.10.
Policy 9: Construction of structures that impede water flow in a primary floodplain will be discouraged.	Consistent	Project site is not within the primary floodplain. See Chapter 4.10.
Policy 10: The County will allow lands which are within flood hazard areas, other than primary floodplains, to be	Consistent	The northwest corner of the project site was historically part

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
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.		of a 100-year floodplain. Changes to the project landform have removed the project facilities from the floodplain.
Policy 11: Protect and maintain watershed integrity within Kern County.	Consistent	Project would not impact watershed integrity. See Chapter 4.10.
Measure D: Review and revise the County’s current Grading Ordinance as needed to ensure that its standards minimize permitted topographic alteration and soil erosion while maintaining soil stability.	Consistent	Project will be subject to current County Grading Ordinance.
Measure F: The County will comply with the Colbey-Alquist Floodplain Management Act in regulating land use within designated floodways.	Consistent	See Policy 9, above.
Measure H: Development within areas subject to flooding, as defined by the appropriate agency, will require necessary flood evaluations and studies.	Consistent	See Policy 9, above.
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.	Consistent	See Policy 9, above.
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.	Consistent	Entitlement process includes revising existing CRWQCB permits, as necessary.
Goal 1: Kern County residents and businesses should receive adequate and cost effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.	Consistent	Project will maintain and expand solid waste (hazardous and non-hazardous) disposal for County residents and businesses.
Goal 5: Ensure that adequate supplies of quality (appropriate for intended use) water are available to residential, industrial, and agricultural users within Kern County.	Consistent	Project will not have an adverse impact on water supplies. See Chapters 4.10 and 4.17.
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.	Consistent	Project is subject to current applicable development fees.
Policy 3: Individual projects will provide availability of public utility service as per approved guidelines of the serving utility.	Consistent	Project is currently served. Project approval will not have an impact on utility service. See Chapter 4.17.

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
Policy 6: The County will ensure adequate fire protection to all Kern County residents.	Consistent	Project will not impact County's ability to ensure adequate fire protection. See Chapter 4.14.
Policy 7: The County will ensure adequate police protection to all Kern County residents.	Consistent	Project will not impact County's ability to provide adequate police protection. See Chapter 4.14
Policy 8: Environmentally safe locations for the disposal of solid waste will be assured by locating sites in accordance with the criteria set forth in Appendix E of this General Plan.	Consistent	Project is at an existing permitted location.
Policy 9: Applicants for all solid waste disposal facilities (Map Code 3.4) and other waste facilities (Map Code 3.7) shall submit closure plans and financial assurance estimates to guarantee closure in conjunction with approval of the required conditional use permit. The requirement for financial assurances may also be satisfied if a State or federal agency will have lead permit responsibility for approval or operational oversight of the facility and which also will require the posting of financial assurances to guarantee site closure. In conjunction with the financial assurances filed with the County, applicants shall enter into a contract with the County to guarantee site closure.	Consistent	Project site is covered by closure plans and financial assurances.
Policy 10: A designated site for solid waste disposal facilities (Map Code 3.4) shall be protected from encroachment of incompatible land uses and intensive urban development. General Plan map code designations which may be compatible for properties adjacent to or within 1,320 feet of solid waste disposal facilities include the following: Resource designations (8.x), 1.2, 3.3, 5.8, 7.1, 7.2, and 7.3. Other map code designations may be compatible subject to project-specific CEQA evaluation. Intensive residential uses, community care facilities, schools, hospitals, recreational vehicle parks, and other uses involving sensitive populations, concentrations of people, and other activities will usually be incompatible adjacent to or near solid waste disposal facilities. Health risk assessment analysis prepared by the land use project applicants may be warranted when considering proposals for General Plan amendments, zone 23 changes, conditional use permits, and sensitive uses within 1,320 feet of a designated solid waste facility site.	Consistent.	Proposed land use entitlements include General Plan classification and appropriate buffers. See Chapter 4.11.
Policy 11: A solid waste disposal facility (Map Code 3.4) and other waste facilities (Map Code 3.7) shall pay its pro-rata share of upgrading of pertinent County roads.	Consistent	Project is subject to applicable fees.
Policy 12: For solid waste disposal facilities, all necessary permits shall be obtained from the Kern County Environmental Health Services Department, Kern County	Consistent	Project is subject to appropriate entitlements. DTSC will rely upon this EIR in acting on the

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
Waste Management Department, State of California Integrated Waste Management Board, State of California Regional Water Quality Control Board, the appropriate Air Pollution Control District, and all other responsible agencies prior to the commencement of operations.		Hazardous Waste Facility Permit renewal.
Policy 13: The County shall ensure landfill capacity for the residents and industry of Kern County.	Consistent	Project will expand non-hazardous waste disposal capacity while protecting hazardous waste capacity.
Policy 14: All solid waste disposal facilities shall designate a buffer around the permitted disposal area as defined by the Map Code 3.4 land use designation.	Consistent	Project entitlements will include revised buffer area.
Policy 15: All other waste facilities (non-hazardous/non-disposal) shall designate a buffer around the permitted waste area as defined by the 3.7 land use designation.	Consistent	See Policy 14.
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.	Consistent	Project is subject to current applicable fee structure.
Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.	Consistent.	See Policy 3.
Measure D: Involve utility providers in the land use and zoning review process.	Consistent	See Policy 3.
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.	Consistent	See Policy 6.
Measure M: Conditional use permits shall be required for solid waste facilities to establish the standards and conditions necessary to protect the public's health and safety and to protect characteristics associated with diverse communities and regions of Kern County.	Consistent	A CUP modification is a required project entitlement.
Measure N: Secure complete and accurate information on all hazardous wastes generated, handled, stored, treated, transported, and disposed of within or through Kern County.	Consistent	Project is in compliance with reporting requirements.
Measure S: County permits for new or expanding hazardous waste disposal facilities shall be approved for a period not to exceed five (5) years. No renewal of a permit will be granted if federal or State law or regulations do not then authorize the issuance of permits to operate new disposal facilities of the proposed type. If the County renews	Consistent	The hazardous waste component of the project is subject to approval of a Hazardous Waste Facility Permit renewal by DTSC.

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
<p>a permit, it may impose any new conditions and restrictions, which are required to bring the permit into conformity with law or the Kern County and Incorporated Cities Hazardous Waste Management Plan.</p>		
<p>Measure U: Each adopted site for a solid waste disposal facility (Map Code 3.4) shall be depicted on the General Plan map and on a map in Appendix E, delineating the boundaries of the facility and existing permanent dwelling units within 1,320 feet of the facility's boundary. Modifications to a permitted disposal area shall require a General Plan Amendment to a Map Code 3.4 for the expansion area and shall simultaneously amend the Map Code 3.4.1 (Other Waste Facility Buffer) boundary to maintain a 1,320-foot buffer area from the permitted disposal area. The General Plan Amendment process shall include amending the facilities map in Appendix E.</p>	<p>Consistent</p>	<p>Existing facility is properly depicted. Expansion of the project site will require amendment of maps. Project is subject to a General Plan Amendment and a 2000-foot buffer.</p>
<p>Measure V: All new solid waste disposal facilities (non-hazardous) (Map Code 3.4) shall own a minimum of 1,320-foot buffer around the permitted operational area as defined by the Map Code 3.4 land use designation and the buffer shall be designated Map Code 3.4.1 (Solid Waste Disposal Facility Buffer). This requirement may be waved or lessened by the Planning Director if adjacent land uses are compatible with the disposal facility such as Heavy and Medium Industrial.</p>	<p>Consistent</p>	<p>Project includes a 2000-foot buffer.</p>
<p>Measure W: Solid waste disposal facilities approved prior to the adoption of this General Plan shall strive to have a 660-foot buffer around the permitted disposal area as defined by the Map Code 3.4 (Solid Waste Disposal Facility) land use designation. Land, which is not owned by the solid waste disposal facility and is within 1,320 feet of a permitted disposal facility, shall include a Map Code 2.10 (Nearby Waste Facility) combining land use designation.</p>	<p>Consistent</p>	<p>Project includes a 2000-foot buffer.</p>
<p>Measure X: The uses that are allowed within the Map Code 3.4.1 (Solid Waste Disposal Facility Buffer) land use designation shall be listed within the conditional use permit approved for the solid waste disposal facility or as provided for in the approved solid waste facility permit.</p>	<p>N/A</p>	<p>Project is Map Code 3.4.</p>
<p>Measure Y: Each adopted site for other waste facilities (Map Code 3.7) shall be depicted on the General Plan map, and on a map in Appendix F delineating the boundaries of the facility, and existing permanent dwelling units within 200 foot of the facility's boundary or 660 foot for a commercial organic compost and transformation facilities. Modifications to the permitted waste area of an Other Waste Facilities shall require a General Plan Amendment to a Map Code 3.7 for the expansion area and shall simultaneously amend the Map Code 3.7.1 (Other Waste Facilities Buffer)</p>	<p>N/A</p>	<p>Project is Map Code 3.4</p>

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency	Project Consistency
Determination		
boundary to maintain the required buffer area from the permitted waste area. The General Plan Amendment process shall include amending the facilities map in Appendix F.		
Measure Z: All new Other Waste Facilities (non-hazardous/non-disposal) (Map Code 3.7) shall own a minimum of 200-foot buffer around the permitted operational area as defined by the Map Code 3.7 land use designation and the buffer shall be designated Map Code 3.7.1 (Other Waste Facility Buffer). Commercial organic compost and transformation facilities shall require a minimum of 660-foot buffer.	N/A	Project is Map Code 3.4.
Measure AA: Other Waste Facilities approved prior to adoption of this General Plan shall strive to have a 200-foot buffer around the permitted disposal area as defined by the 3.7 land use designation. Land, which is not owned by the other waste facility and is within 200-foot of a permitted disposal facility, shall include a Map Code 2.10 (Nearby Waste Facility) combining land use designation, except for commercial organic compost and transformation facilities which require a 660-foot designated buffer.	N/A	Project is Map Code 3.4
Measure BB: The uses, which are allowed within the Map Code 3.7.1 (Other Waste Facility Buffer) land use designation, shall be listed within the approved conditional use permit or as provided by the appropriate permit.	N/A	Project is Map Code 3.4.
Measure CC: Existing designated solid waste facilities are consistent with the General Plan. To further clarify the nature of future facilities, the County shall apply the following land use map codes. 2.10 (Nearby Waste Facility) 2.11 (Burn Dumps) 3.4.1 (Solid Waste Disposal Facility Buffer) 3.7 (Other Waste Facilities) 3.7.1 (Other Waste Facilities Buffer)	Consistent	Project is Map Code 3.4
Measure DD: Existing Map Code 3.4 (Solid Waste Disposal Facility) facilities that have approved permits consistent with Map Code 3.7 (Other Waste Facilities) may not expand their allowed land uses without a consistency finding with this General Plan. To be consistent a General Plan Amendment from Map Code 3.4 (Solid Waste Disposal Facility) to Map Code 3.7 (Other Waste Facilities), and a buffer designated Map Code 3.7.1 (Other Waste Facilities Buffer) may be required.	Consistent	Project is Map Code 3.4.
Measure EE: Existing Map Code 3.4 (Solid Waste Disposal Facility) facilities that have approved permits consistent with Map Code 3.7 (Other Waste Facilities) may not intensify their allowed land uses without a consistency	Consistent.	Project will require approval of an amended CUP.

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
finding with this General Plan. To be consistent a new conditional use permit and a buffer designated Map Code 3.4.1 (Solid Waste Disposal Facility Buffer) may be required.		
Measure FF: A traffic study/analysis shall be required for all discretionary new or expanded solid waste facilities. The study shall include an analysis of the status of facility access roads and the need to upgrade those roads. Mitigation may be imposed to address impacts to these roads.	Consistent	A project traffic study was prepared. Project access will be improved.
1.9 Resources		
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	Project will not impact agriculture, rangeland, or mineral resources. Project would support petroleum development.
Goal 3: Ensure the development of resource areas minimize effects on neighboring resource lands.	N/A	
Goal 5: Conserve prime agricultural lands from premature conversion	Consistent	Project site does not include prime farmland.
Policy 1: Appropriate resource uses of all types will be encouraged as desirable and consistent interim uses in undeveloped portions of the County regardless of General Plan designation.	N/A	
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.	Consistent	Project site is zoned for Agriculture and will be rezoned to Industrial. No farmland or farming activity occurs on site.
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	Project expansion area is designed to reduce impacts to natural drainages.
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.	Consistent	Project site is not a high value range site.
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 water system shall be conserved through the use of agricultural zoning with minimum parcel size provisions.	Consistent	Project site does not contain prime farmland.

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
Goal 1: Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.	Consistent	Project site includes appropriate buffers and is not adjacent to residential or commercial development.
Policy 9: New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure which it generates and upon which it is dependent.	Consistent	Project is subject to applicable fees.
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	An EIR has been prepared to evaluate the environmental effects of the project.
Policy 16: The developer shall assume full responsibility for costs incurred in service extension or improvements that are required to serve the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.	Consistent	Project is subject to applicable fees. No significant impacts to services have been identified. See Chapter 4.17.
Measure D: The appropriate agency should develop sewer and water master plans in areas where these services are lacking or deficient and in areas where urban development exists or is designated. Seek non-local sources of funding for implementing capital improvement plans.	N/A	Project is not served by a public sewer or water system.
Measure E: All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply and Preservation of Environmental Health Rules and Regulations administered by the County’s Public Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site specific documentation that characterize the quality of upper groundwater in the alternative septic systems would adversely impact groundwater quality. If the evaluation indicated that the uppermost groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant would be required to supply sewage collection, treatment, and disposal facilities.	Consistent	The project would not require expansion of the existing septic system. See Chapter 4.17.
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	Consistent	Project would not have a significant effect on air quality with implementation of mitigation. See Chapter 4.3.

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
effective military operations and in the valley region to meet attainment goals.		
<p>Policy 19: In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision making body, as part of its deliberations, will ensure that:</p> <ul style="list-style-type: none"> (1) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and (2) The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act. 	Consistent	The EIR identifies feasible mitigation measure to reduce all project impacts to less than significant.
<p>Policy 20: The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District on ministerial permits.</p>	Consistent	Project mitigation includes dust control measures. See Chapter 4.3.
<p>Policy 21: The County shall support air districts efforts to reduce PM₁₀ and PM_{2.5} emissions.</p>	Consistent	Project mitigation includes dust control measures. See Chapter 4.3.
<p>Policy 22: Kern County shall continue to work with the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District toward air quality attainment with federal, state, and local standards.</p>	Consistent	Project does not obstruct implementation of attainment standards. See Chapter 4.3.
<p>Measure F: All discretionary permits shall be referred to the appropriate air district for review and comment.</p>	Consistent	Project has been forwarded to SJVAPCD.
<p>Measure G: Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to:</p> <ul style="list-style-type: none"> a. Minimizing idling time. b. Electrical overnight plug-ins. 	Consistent	See mitigation measures for off and on-road vehicles, Chapter 4.3.
<p>Measure H: Discretionary projects may use one or more of the following to reduce air quality effects:</p> <ul style="list-style-type: none"> 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. 	Consistent	See mitigation measures for air quality, Chapter 4.3.

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
<p>f. Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces.</p> <p>g. Provide bicycle lockers and shower facilities on site.</p> <p>h. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).</p> <p>i. The use and development of park and ride facilities in outlying areas.</p> <p>j. Other strategies that may be recommended by the local Air Pollution Control Districts.</p>	Consistent	Project mitigation includes dust control measures. See Chapter 4.3.
<p>Measure J: The County should include PM10 control measures as conditions of approval for subdivision maps, site plans, and grading permits.</p>	Consistent	Project site does not include cultural or historic resources.
<p>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.</p>	Consistent	A records search was conducted with Southern San Joaquin Valley Information Center (SSJVIC) housed at the California State University, Bakersfield. See Chapter 4.5.
<p>Measure K: Coordinate with the California State University, Bakersfield’s Archaeology Inventory Center.</p>	Consistent	An archaeological study was prepared. See Chapter 4.5.
<p>Measure L: The County shall address archaeological and historical resources for discretionary projects in accordance with CEQA.</p>	Consistent	A paleontological study was prepared. See Chapters 4.5 and 4.7.
<p>Measure M: In areas of known paleontological resources, the County should address the preservation of these resources where feasible.</p>	Consistent	County conducted notification a required.
<p>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.</p>	Consistent	Cultural resources study did not identify a need for monitoring. No California Native American Tribe requested monitoring during the consultation process.
<p>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.</p>	Consistent.	Mitigation measures would reduce impacts to special status species. See Chapter 4.4.
<p>Policy 27: Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.</p>	Consistent	With implementation of feasible mitigation, no significant
<p>Policy 28: County should work closely with State and federal agencies to assure that discretionary projects avoid</p>	Consistent	With implementation of feasible mitigation, no significant

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
or minimize impacts to fish, wildlife, and botanical resources.		impacts to special status species would occur. See Chapter 4.4
Policy 29: The County will seek cooperative efforts with local, State, and federal agencies to protect listed threatened and endangered plant and wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.	Consistent	With implementation of feasible mitigation, no significant impacts to special status species would occur. See Chapter 4.4
Policy 31: Under the provisions of the California Environmental Quality Act, 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 is prepared.	Consistent	CDFW and USFWS were notified during the scoping process and will be notified of the Draft EIR review period.
Policy 32: Riparian areas will be managed in accordance with the USACE and the CDFW rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.	Consistent	No significant impacts would occur to riparian habitat. See Chapter 4.4.
Measure Q: Discretionary projects shall consider effects to biological resources as required by CEQA.	Consistent	See Chapter 4.4 regarding biological resources.
Measure R: Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to CEQA.	Consistent	See Chapter 4.4 regarding biological resources.
Policy 34: Ensure that water quality standards are met for existing users and future development.	Consistent	The project would not violate a water quality standard. See Chapter 4.10.
Policy 41: Review development proposals to ensure adequate water is available to accommodate projected growth.	Consistent	The project would not have a significant effect on groundwater supply. See Chapter 4.10.
Policy 43: Drainage shall conform to the Kern County Development Standards and the Grading Ordinance.	Consistent	Project is subject to the Kern County Grading Ordinance.
Policy 44: Discretionary projects shall analyze watershed impacts and mitigate for construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by the California Environmental Quality Act (CEQA), to prevent the degradation of the watershed to the extent practical.	Consistent	The project would not adversely affect surface waters. See Chapter 4.10.
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; and (iii) Encouraging the retrofitting of existing development with water conserving devices.	Consistent	The project would not have a significant affect on water supplies. See Chapters 4.10 and 4.17.

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
Policy 47: Ensure that light and glare from discretionary new development projects are minimized in rural as well as urban areas.	Consistent	Project would not have a significant affect related to glare. Potential lighting impacts would be mitigated by conformance with County standards. See Chapter 4.1.
Policy 48: Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties.	Consistent	Project is subject to County standards. No glare impact has been identified. See Chapter 4.1.
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.	Consistent	See Chapter 4.1.
Goal 4: Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.	Consistent	The project would not have a significant effect on the environment with implementation of feasible mitigation.
Goal 5: Maintain a minimum [level of service] LOS D for all roads throughout the County.	Consistent	LOS is no longer used as an impact standard under CEQA. However, the project would not reduce LOS to an unacceptable level.
Policy 1: Development of roads within the County shall be in accordance with the Circulation Diagram Map. The chartered roads are usually on section and mid-section lines. This is because the road center line can be determined by an existing survey.	N/A	Project does not include or require development of additional roads.
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; Collector [Secondary Highway] Minimum 90-foot right-of-way; Commercial-Industrial Street Minimum 60-foot right-of-way; and Local Street [Select Local Road] Minimum 60-foot right-of-way.	N/A	Project does not include or require development of additional roads.
Measure A: The Planning Department shall carry out the road network Policies by using the Kern County Land Division Ordinance and Zoning Ordinance, which	Consistent	Project does not include or require development of additional roads. The project will

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
implements the Kern County Development Standards that includes 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.		relocate the Facility entrance, consistent with County standards and with review by Public Works.
Goal 1: To provide ample flexibility in this plan to allow for growth beyond the 20-year planning horizon.	Consistent	Project would support waste services for future County growth.
Goal 2: Kern County intends to set up a system maintaining and coordinating road vacation procedures in all elements of the General Plan and the incorporated cities general plans.	N/A	Project does not require vacation of a road.
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 Level of Service (LOS) D. Utilization of the CEQA process would help identify alternatives to or mitigation for such developments. Mitigation could involve amending the Land Use, Open Space and Conservation Element to establish jobs/housing balance if projected trips in any traffic zone exceed trips identified for this Circulation Element. Mitigation could involve exactions to build offsite transportation facilities. These enhancements would reduce traffic congestion to an acceptable level.	Consistent	The traffic study found that LOS C would be maintained at all study intersections and roadways.
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.	N/A	Project would not construct new roadways.
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.	N/A	Project would not require or construct new roadways.
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.	N/A	Project would not require or construct new roadways.

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
Measure C: Project development shall comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.	Consistent	Project is consistent with proposed zoning designation.
Goal 2: Kern County intends to set up a system maintaining and coordinating road vacation procedures in all elements of the General Plan and the incorporated cities general plans.	N/A	Project does not include vacation of a roadway.
Goal 1: To satisfy the trip reduction and travel demand requirements of the Kern Council of Government's Congestion Management Program.	Consistent	Project would not have a significant effect on travel, as analyzed in the project traffic study.
Goal 1: Provide for Kern County's heavy truck transportation in the safest way possible.	Consistent	Project truck traffic would not have an effect on transportation safety. See Chapter 4.15.
Goal 2: Reduce potential overweight trucks.	Consistent	Project haul trucks must comply with applicable regulations. Trucks are weighed at the Facility.
Goal 3: Use State Highway System improvements to prevent truck traffic in neighborhoods.	Consistent	See Figure 3-7. Haul truck routes use I-5 and local roadways to avoid populated areas.
Policy 1: Caltrans should be made aware of the heavy truck activity on Kern County's roads.	Consistent	Caltrans was notified of the preparation of the EIR.
Goal 1: Reduce risk to public health from transportation of hazardous materials.	Consistent	See Chapter 4.9.
Policy 1: The commercial transportation of hazardous material, identification and designation of appropriate shipping routes will be in conformance with the adopted Kern County and Incorporated Cities Hazardous Waste Management Plan.	Consistent	Project is subject to applicable regulations.
Goal 1: Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.	Consistent	The project would not result in a significant noise impact. See Chapter 4.13.
Goal 2: Protect the economic base of Kern County by preventing the encroachment of incompatible land uses near known noise producing roadways, industries, railroads, airports, oil and gas extraction, and other sources.	Consistent	The project includes appropriate buffers. Adjacent land uses are compatible with the project.
Policy 1: Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.	Consistent.	The project would not result in a significant noise impact. See Chapter 4.13.
Policy 3: Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise.	Consistent	The project would not result in a significant noise impact. See Chapter 4.13. Project includes some perimeter landscaping.

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
Policy 4: Utilize good land use planning principles to reduce conflicts related to noise emissions.	Consistent	The project would not result in a significant noise impact. See Chapter 4.13.
Policy 7: Employ the best available methods of noise control.	Consistent	The project would not result in a significant noise impact. See Chapter 4.13.
Measure A: Utilize zoning regulations to assist in achieving noise-compatible land use patterns.	Consistent	The project would not result in a significant noise impact. See Chapter 4.13.
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.	Consistent	The project would not result in a significant noise impact. See Chapter 4.13.
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} .	Consistent	The project would not result in a significant noise impact. See Chapter 4.13.
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	Consistent	The project would not result in a significant noise impact. See Chapter 4.13.
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.	Consistent	The project would not result in a significant noise impact. Feasible mitigation for landfill operations is included in MM 4.13-1. See Chapter 4.13.

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
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.		
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.	Consistent	Feasible mitigation for landfill operations is included in MM 4.13-1. Mitigation measures will be included as a condition of approval. See Chapter 4.13.
Goal 1: Minimize injuries and loss of life and reduce property damage.	Consistent	The project would not have an adverse effect on human health or property.
Measure F: The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by the Federal Emergency Management Agency (FEMA), shall be used as a source document for preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA), evaluation of project proposals, formulation of potential mitigation, and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.	Consistent	EIR analysis includes the County MHMP. See Chapter 4.9.
Policy 1: The County shall require development for human occupancy to be placed in a location away from an active earthquake fault in order to minimize safety concerns.	Consistent	The project site is not subject to a significant seismic risk and does not include residences. See Chapter 4.7.
Measure B: Require geological and soils engineering investigations in identified significant geologic hazard areas in accordance with the Kern County Code of Building Regulations.	Consistent	An engineering design study is required for the project prior to issuance of building or grading permits. See Chapter 4.7.
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.	Consistent	The project site is not subject to a significant seismic risk. See Chapter 4.7.
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 project site is not subject to a significant liquefaction risk. See Chapter 4.7.
Policy 3: Reduce potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.	Consistent	The project site is not subject to a significant geological risk. See Chapter 4.7.
Policy 1: Require discretionary projects to assess impacts on emergency services and facilities.	Consistent	Project would not have a significant effect on emergency

TABLE 4.11-3: CONSISTENCY ANALYSIS WITH KERN COUNTY GENERAL PLAN FOR LAND USE

Goals and Policies	Consistency Determination	Project Consistency
Policy 3: The County will encourage the promotion of fire prevention methods to reduce service protection costs and costs to taxpayers.	Consistent	services. See Chapters 4.14 and 4.9. Project includes incorporation of fire prevention per MM 4.14-1. See Chapter 4.14.
Policy 4: Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.	Consistent	Project site has adequate emergency access. See Chapter 4.15.
Policy 6: All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department.	Consistent	Project will comply with applicable fire codes and polices. See Chapters 4.9, 4.14, and 4.18.
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.	Consistent	Project will comply with applicable fire codes and polices. See Chapters 4.9, 4.14, and 4.18.
Measure A: Facilities used to manufacture, store, and use of hazardous materials shall comply with the Uniform Fire Code, with requirements for siting or design to prevent onsite hazards from affecting surrounding communities in the event of inundation.	Consistent	Project will comply with applicable fire codes and polices. See Chapters 4.9, 4.14, and 4.18.

4.12.1 Introduction

This section of the EIR describes the existing environment and regulatory setting regarding mineral resources. It also describes the impacts to mineral resources that would result from implementation of the proposed project. The information in this section is based on the Kern County General Plan, California Department of Conservation (DOC) documents and maps, California Geologic Survey (CGS) information, California Geologic Energy Management Division (CalGEM) [formerly the California Division of Oil, Gas, and Geothermal Resources (DOGGR)] information, and the U.S. Geological Survey (USGS) Mineral Resources Data System.

4.12.2 Environmental Setting

The nonrenewable characteristic of mineral deposits necessitates the careful and efficient development of mineral resources in order to prevent the unnecessary waste of these deposits due to careless exploitation and uncontrolled urbanization. Management of these mineral resources will protect not only future development of mineral deposit areas but will also limit the exploitation of mineral deposits so that adverse impacts caused by mineral extraction will be reduced or eliminated. This section discusses the existing conditions related to mineral resources in the project area, including the project site.

Regional Setting

Mineral and petroleum resources are essential to Kern County's economy; Kern County produces more oil than any other county in the United States. In addition, borax, cement, and construction aggregates constitute major economic mineral resources. The Surface Mining Control and Reclamation Act of 1977 (SMCRA) requires the State Geologist to classify land into Mineral Resource Zones (MRZs) according to its known or inferred mineral potential. The State Geologist has classified 2,971 square miles of land in Kern County as MRZs of varying significance. Mineral resources in Kern County include numerous mining operations that extract a variety of materials, including sand and gravel, stone, gold, dimension stone, limestone, clay, shale, gypsum, pumice, decorative rock, silica, and specialty sand.

The MRZ categories are defined as follows (CGS 1999):

- **MRZ-1:** Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- **MRZ-2a:** Areas underlain by mineral deposits where geologic data indicate that significant measured or indicated resources are present. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves. Land included in MRZ-2a is of prime importance because it contains known economic mineral deposits.
- **MRZ-2b:** Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain inferred mineral

resources as determined by their lateral extension from proven deposits or their similarity to proven deposits. Further exploration could result in upgrading areas classified MRZ-2b to MRZ-2a.

- **MRZ-3a:** Areas containing known mineral occurrences of undetermined economic significance. Further exploration could result in reclassification of all or part of these areas into the MRZ-2a or MRZ-2b categories.
- **MRZ-3b:** Areas containing inferred mineral occurrences of undetermined economic significance. Further exploration could result in the reclassification of all or part of these areas into the MRZ-2a or MRZ-2b categories.
- **MRZ-4:** Areas containing no known mineral occurrence.

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: CGS 1999

Petroleum Resources

As mentioned above, Kern County produces more oil than any other county in the United States. The valley floor area of Kern County and the surrounding lower elevations of the mountain ranges contain numerous deposits of oil and gas resources, a major economic resource for the County.

Sand and Gravel

As discussed in the Land Use, Open Space, and Conservation Element of the Kern County General Plan, construction aggregates are a major economic mineral resource for Kern County. Sand and gravel have been determined to be important resources for construction, development, and physical maintenance, from highways and bridges to swimming pools and playgrounds. The availability of sand and gravel affects construction costs, tax rates, and affordability of housing and commodities. The State of California has statutorily required the protection of sand and gravel operations. Because transportation costs are a significant portion of the cost of sand and gravel, the long-term availability of local sources of this resource is an important factor in maintaining the economic attractiveness of a community to residents, business, and industry. The major resources of sand and gravel in Kern County are in stream deposits along the

eastern side of the San Joaquin Valley and in the Sierra Nevada foothills and in alluvial fan deposits along the north flank of the San Emidio and Tehachapi Mountains at the southern end of the County. Most of the recent alluvium in the San Joaquin Valley floor is composed of sand used as a source of road base material.

Borax

As discussed in the Land Use, Open Space, and Conservation Element of the Kern County General Plan, borax constitutes a major economic mineral resource for eastern Kern County. Borax, a borate mineral (a compound that contains Boron and oxygen), was discovered and put into production in 1872 in Nevada and later, in 1881, in Death Valley. Ironically, for five years the route traveled by Pacific Coast Borax Company's famous twenty mule team trains would pass within 15 miles of a buried deposit that would produce in about six minutes the equivalent tonnage hauled by the mule team during each trip. The discovery of borates in southeastern Kern County in the Kramer District was accidental, when a water well penetrated lakebeds containing colemanite (calcium borate) in 1913. In 1927, underground mining of the minerals kernite and borax began and continued until 1957, when underground operations ceased and open-pit mining began, eventually becoming the largest open-pit mine in California. This mine supplies about 40% of the world's supply of borates. There are several other sources of borate minerals in the County (CGS 1999).

Limestone

Carbonate rocks were initially quarried in 1888 as a source of lime. By 1909 the limestone resources were used for the manufacture of Portland cement during the construction of the first Los Angeles aqueduct. Limestone has been mined continuously since 1921, just northeast of Tehachapi, for the manufacture of Portland cement. The Tehachapi Plant was joined by California Portland Cement Company's Mojave Plant in 1955 and National Cement Company's Lebec Plant in 1976, making Portland cement production second only to borates in terms of economic importance to the region. Cement production is a major economic resource in the County (CGS 1999).

Dimension Stone

Dimension stone is natural rock materials quarried for the purpose of obtaining blocks or slabs that meet specification as to size (width, length, and thickness) and shape. Color, grain, texture and pattern, as well as surface finish, durability, strength, and polish ability are important selection criteria in determining dimension stone. Deposits of marble, sandstone, schist, and other rocks in Kern County have been sources of modest tonnages of building stone which have been utilized as dimension stone, field stone, rubble, and flagstone. Most of the dimension stone (marble and flagstone) was mined until 1904; field stone and flagstone have been mined mostly since about 1952 in the area around Randsburg (CGS 1999).

Precious Minerals (Gold and Silver)

In terms of total dollar value and number of deposits, gold is the most important metallic mineral commodity that has been mined in Kern County. The earliest mining in Kern County was in 1851 at placer gold deposits in Greenhorn Gulch, which drains into the Kern River about midway between Democrat Springs and Miracle Hot Springs. The first lode mining was in 1852, and by 1865 gold was being mined in four districts around the Kern River. Gold was first prospected in eastern Kern in the 1860s, with the two largest mines

being established in the 1890s. The Yellow Aster and Golden Queen mines located in eastern Kern have yielded almost half of the total gold output of the county. The principal sources of silver in Kern County have been deposits in eastern Kern County. Although gold is the chief mineral in value, silver is predominant by a 5:1 ratio and is an important by-product of the gold ore (CGS 1999). In production since 2016, the Golden Queen Mine has produced more than 12,255 ounces of gold and 100,408 ounces of silver (Cox 2019). The mine is located in eastern Kern County outside the community of Mojave.

Local Setting

As described in Chapter 3, *Project Description*, the project site is comprised of two parcels that total approximately 640 acres. The existing Facility site is extensively disturbed and developed with a solid and hazardous waste Facility that has been in continuous operation since being permitted via conditional use permit in 1982. The active waste Facility is located on APN 099-290-17 and the proposed expansion area would encompass APN 099-251-32. The project site does not have a “producing” mineral right parcel within its boundaries and the nearest mineral rights parcels are APN 099-230-35 and APN 099-160-21, both located directly north of the project site.

The western administrative boundary of the Bakersfield Production Consumption Region, as classified by the State Geologist from “Special Report 210 – Update of Land and Mineral Classification: Aggregate Mineral in the Bakersfield Production-Consumption Region, is just east of the project site, along the aqueduct. The project sites do not include land classified as an MRZ (CGS 2009). The closest MRZ to the project sites is an area located approximately 15 miles southeast of the project site within the Bakersfield Production Consumption Region.

The Kern County General Plan designates areas containing or producing potentially productive petroleum fields, natural gas, and geothermal resources and mineral deposits of regional and statewide significance as Map Code 8.4, Mineral and Petroleum (Minimum 5-acre Parcel Size). The project site is not located within a designated mineral and petroleum resource site within the Kern County General Plan and is not located within the General Plan designation of 8.4 (Mineral and Petroleum).

The project site is approximately 1.5 miles east of the Belridge South Oil and Gas Field and approximately 1-mile south of the Cal Canal Gas Field, both which include many active, idle, and plugged oil and gas wells. The closest active oil and gas well is within the Belridge South Oil and Gas Field and is located approximately 1.59 miles west from the western boundary of APN 099-290-17 (existing landfill site). The project site does not have any known active oil & gas wells; however, one plugged oil and gas well is located on APN 099-261-32 (DOC 2022).

4.12.3 Regulatory Setting

Federal

There are no applicable Federal regulations for this issue area.

State

Surface Mining Control and Reclamation Act of 1977

The Surface Mining Control and Reclamation Act (SMCRA) of 1977 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. MRZs near the project sites are presented in Section 4.12.2, *Environmental Setting*.

California Geologic Energy Management Division

The CalGEM (formerly known as the Division of Oil, Gas, and Geothermal Resources) is a State agency responsible for supervising the drilling, operation, maintenance, plugging, and abandonment of oil, gas, and geothermal wells. CalGEM's regulatory program promotes the wise development of oil, natural gas, and geothermal resources in California through sound engineering practices, prevention of pollution, and implementation of public safety programs. To implement this regulatory program, CalGEM requires avoidance of building over or near plugged or abandoned oil and gas wells or requires the remediation of wells to current CalGEM standards.

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 proposed 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 of neighboring resource lands.

Policies

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

Policy 17: Lands classified as MRZ-2, as designated by the State of California, should be protected from encroachment of incompatible land uses.

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).

4.12.4 Impacts and Mitigation Measures

This section evaluates the impacts to mineral resources that may occur during construction and operation of the proposed project. It describes the potential mineral resources located on and adjacent to the project site that may be affected and identifies the thresholds used to determine 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 significant project impacts related to mineral resources were identified based on Kern County General Plan maps, CGS information, USGS mineral resource data, and aerial imagery. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

Kern County's Environmental Checklist identifies the following criteria, as established in Appendix G of the State CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect related to mineral resources. The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to 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 and Mitigation Measures

Impact 4.12-1: The project would not 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.

The proposed project is not designated as Map Code 8.4 (Mineral and Petroleum) in the Land Use, Open Space, and Conservation Element of the Kern County General Plan. The site is not designated as a mineral or petroleum valued site in the Kern County General Plan and is not located within the NR (Natural Resources) or PE (Petroleum Extraction) zone districts. No known deposits of economically extractable minerals, petroleum, or construction materials, other than soil, occur on the project site. No deposits of commercial grade petroleum are known to occur in the area and the project is not located on lands classified as MRZs by the CGS. Given these characteristics, the project would not interfere with mineral extraction operations, including the nearby oil and gas fields, and would not result in the loss of land designated for mineral resources.

The project does not propose structures that would impair the recovery of any mineral resources if they are discovered. One plugged oil and gas well is located on APN 099-261-32; however, with the implementation of MM 4.9-2, impacts would be less than significant. As denoted on the Site Plan in Chapter 3, Project Description, no disturbance, construction, or stockpiling is proposed within 10 feet of the abandoned and

plugged well. Implementation of the project would not prohibit future maintenance and monitoring activities of the plugged oil and gas well.

Mitigation Measures

Implement Hazards and Hazardous Materials MM 4.9-2.

Level of Significance after Mitigation

With implementation of Mitigation Measure 4.9-2, which would avoid the abandoned well, and mitigate any potential leaks, impacts would be less than significant (see Section 4.9, *Hazards and Hazardous Materials*).

Impact 4.12-2: The project would not 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.

As previously noted in response to Impact 4.12-1, the proposed project components would not be located within an MRZ area. Implementation of the project would not impede existing mineral extraction in the project area. As such, the project would not result in the loss of availability of locally important mineral resource recovery sites delineated by the Kern County General Plan and impacts to mineral resources recovery would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

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 3.10, *Cumulative Projects*, of this EIR discusses cumulative projects near and related to the proposed project. **Table 3-8, Cumulative Projects List**, in Chapter 3 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 not contribute to cumulative mineral resources impacts.

As discussed above, the proposed project would not impact access to, or result in the loss of availability of, any known regional, statewide, or local mineral resources or mineral resource areas designated in the Kern County General Plan. **Table 3-8, *Cumulative Projects List***, in Chapter 3, *Project Description*, identifies six cumulative projects. The six cumulative projects are not located within a designated MRZ area and are not expected to contribute to cumulative impacts related to mineral resources. Therefore, the less-than-significant impacts of the proposed project would not contribute cumulatively to the loss of availability of a known mineral resource or locally important mineral resource recovery site and cumulative impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Cumulative impacts would be less than significant.

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4.13.1 Introduction

This section of the EIR describes the affected environment and regulatory setting for the proposed project and provides an analysis of potential impacts related to noise and groundborne vibration from project implementation. Additionally, mitigation measures to reduce potential noise and vibration impacts are identified, where appropriate. The information and analysis in this section is largely based on ambient noise levels in the project area, estimated noise levels generated by typical construction equipment, the *Kern County General Plan Noise Element*, distance from sensitive noise receptors, and the *Noise Study for Clean Harbors Buttonwillow Facility WMU 36, 37 & 38 Nonhazardous Waste Disposal Landfill – Modification to Conditional Use Permit* (prepared by Ramboll US Corporation, November 2021) located in Appendix I of this EIR.

Noise Fundamentals

An understanding of the physical characteristics of noise is useful for evaluating environmental noise impacts. The methods and metrics used to quantify noise exposure, human response, and relative judgment of loudness are also discussed, and noise levels of common noise environments are presented.

Noise is generally defined as loud, unpleasant, unexpected, or undesired 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).

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. The subjective responses of individuals to similar noise events are diverse and influenced by many factors, including the type of noise, the perceived importance of the noise, its appropriateness to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity.

Interference effects of environmental noise refer to those effects that interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, and telephone conversations, and interference with sleep. Sleep interference effects can include both awakening from sleep and arousal to a lesser state of sleep.

Sound

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air, and are sensed by the human ear. Sound is generally characterized by several variables, including frequency and amplitude. Frequency describes the sound's pitch (tone) and is measured in cycles per second (Hertz [Hz]), while amplitude describes the sound's pressure (loudness). Because the range of sound pressures that occurs in the environment is extremely large, it is convenient to express these pressures on a logarithmic scale that compresses the wide range of pressures into a more useful range of numbers. The standard unit of sound measurement is the decibel (dB). Hz is a measure of how many times each second the crest of a sound pressure wave passes a fixed point. For example, when a drummer beats a drum, the skin of the drum vibrates a given number of times per second. If the drum vibrates 100 times per second, it generates a sound pressure wave that is oscillating at 100 Hz, and this pressure oscillation is perceived by the ear/brain as a tonal pitch of 100 Hz. Sound frequencies between 20 and 20,000 Hz are within the range of sensitivity of the healthy human ear.

Sound levels are expressed by reference to a specified national/international standard. The sound pressure level is used to describe sound pressure (loudness) and is specified at a given distance or specific receptor location. In expressing sound pressure level on a logarithmic scale, sound pressure (dB) is referenced to a value of 20 micropascals (μPa). Sound pressure level depends not only on the power of the source but also on the distance from the source to the receiver and the acoustical characteristics of the sound propagation path (absorption, reflection, etc.).

Outdoor sound levels decrease logarithmically as the distance from the source increases. This decrease is due to wave divergence, atmospheric absorption, and ground attenuation. Sound radiating from a source in a homogeneous and undisturbed manner travels in spherical waves. As the sound waves travel away from the source, the sound energy is dispersed over a greater area, decreasing the sound pressure of the wave. Spherical spreading of the sound wave from a point source reduces the noise level at a rate of 6 dB per doubling of distance.

Atmospheric absorption also influences the sound levels received by an observer. The greater the distance traveled, the greater the influence of the atmosphere and the resultant fluctuations. Atmospheric absorption becomes important at distances greater than 1,000 feet. The degree of absorption varies depending on the frequency of the sound as well as the humidity and temperature of the air. For example, atmospheric absorption is lowest (i.e., sound carries farther) at high humidity and high temperatures, and lower frequencies are less readily absorbed (i.e., sound carries farther) than higher frequencies. Over long distances, lower frequencies become dominant as the higher frequencies are more rapidly attenuated. Turbulence, gradients of wind, and other atmospheric phenomena also play a significant role in determining the degree of attenuation. For example, certain conditions, such as temperature inversions, can channel or focus the sound waves, resulting in higher noise levels than would result from simple spherical spreading.

Sound from a tuning fork contains a single frequency (a pure tone), but most sounds in the environment do not consist of a single frequency. Instead, they are a broad band of many frequencies differing in sound level. Because of the broad range of audible frequencies, methods have been developed to quantify these values into a single number representative of human hearing. The most common method used to quantify environmental sounds consists of evaluating all frequencies of a sound according to a weighting system that is reflective of human hearing characteristics. Human hearing is less sensitive at low frequencies and extremely high frequencies than at the mid-range frequencies. This process is termed "A weighting," and the resulting dB level is termed the "A-weighted" decibel (dBA).

Because A-weighting is designed to emulate the frequency response characteristics of the human ear and reflect the way people perceive sounds, it is widely used in local noise ordinances and state and federal guidelines, including those of the State of California and Kern County. Unless specifically noted, the use of A-weighting is always assumed with respect to environmental sound and community noise, even if the notation does not include the “A.”

In terms of human perception, a sound level of 0 dBA is the threshold of human hearing and is barely audible by a healthy ear under extremely quiet listening conditions. This threshold is the reference level against which the amplitude of other sounds is compared. Normal speech has a sound level of 60 dBA. Sound levels above about 120 dBA begin to be felt inside the human ear as discomfort, progressing to pain at still higher levels. Humans are much better at discerning relative sound levels than absolute sound levels. The minimum change in the sound level of individual events that an average human ear can detect is about 1 to 3 dBA. A 3 to 5 dBA change is readily perceived. An increase (or decrease) in sound level of about 10 dBA is usually perceived by the average person as a doubling (or halving) of the sound’s loudness.

Because of the logarithmic nature of the decibel, sound levels cannot be added or subtracted directly. However, some simple rules are useful in dealing with sound levels. First, if a sound’s acoustical energy is doubled, the sound level increases by 3 dBA, regardless of the initial sound level (e.g., 60 dBA + 60 dB = 63 dBA; 80 dBA + 80 dBA = 83 dBA). However, an increase of 10 dBA is required to double the perceived loudness of a sound, and a doubling or halving of the acoustical energy (a 3 dBA difference) is at the lower limit of readily perceived change.

Although dBA may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most ambient environmental noise includes a mixture of noise from nearby and distant sources that creates an ebb and flow of sound, including some identifiable sources plus a relatively steady background noise in which no particular source is identifiable. A single descriptor, termed the equivalent sound level (L_{eq}), is used to describe sound that is constant or changing in level. L_{eq} is the energy-mean dBA during a measured time interval. It is the “equivalent” sound level produced by a given constant source equal to the acoustic energy contained in the fluctuating sound level measured during the interval. In addition to the energy-average level, it is often desirable to know the acoustic range of the noise source being measured. This is accomplished through the maximum instantaneous (L_{max}) and minimum instantaneous (L_{min}) noise level indicators that represent the root-mean-square maximum and minimum noise levels measured during the monitoring interval. The L_{min} value obtained for a particular monitoring location is often called the acoustic floor for that location.

To describe the time-varying character of environmental noise, the statistical or percentile noise descriptors L_{10} , L_{50} , and L_{90} may be used, which represent the noise levels equaled or exceeded during 10 percent, 50 percent, and 90 percent of the measured time interval, respectively. Sound levels associated with L_{10} typically describe transient or short-term events, L_{50} represents the median sound level during the measurement interval, and L_{90} levels are typically used to describe background noise conditions.

The Day-Night Average Sound Level (L_{dn} or DNL) represents the average sound level for a 24-hour day and is calculated by adding a 10 dBA penalty to sound levels during the night period (10:00 p.m. to 7:00 a.m.). The L_{dn} is the descriptor of choice and used by nearly all federal, state, and local agencies throughout the United States to define acceptable land use compatibility with respect to noise. Within California, the Community Noise Equivalent Level (CNEL) is sometimes used. CNEL is very similar to L_{dn} , except that an additional 5 dBA penalty is applied to the evening hours (7:00 p.m. to 10:00 p.m.). Because of the time-of-day penalties associated with the L_{dn} and CNEL descriptors, the dBA value of L_{dn} or CNEL for a continuously

operating sound source during a 24-hour period will be numerically greater than the dBA value of the 24-hour L_{eq} . Thus, for a continuously operating noise source producing a constant noise level operating for periods of 24 hours or more, the L_{dn} will be 6 dBA higher than the 24-hour L_{eq} value. For convenience, a summary of common noise metrics is provided in **Table 4.13-1, Common Noise Metrics**.

TABLE 4.13-1: COMMON NOISE METRICS

Unit of Measure		Description
dB	Decibel	Decibels, which are units for measuring the volume of sound, are measured on a logarithmic scale, representing points on a sharply rising curve. For example, 10 dB sounds are 10 times more intense than 1 dB sounds, and 20 dB sounds are 100 times more intense. A 10 dB increase in sound level is perceived by the human ear as a doubling of the loudness of the sound.
dBA	A-Weighted Decibel	A sound pressure level that has been weighted to quantitatively reduce the effect of high- and low-frequency noise. It was designed to approximate the response of the human ear to sound.
CNEL	Community Noise Equivalent Level	A metric representing the 24-hour average sound level that includes a 5 dBA penalty during relaxation hours (7 p.m. to 10 p.m.) and a 10 dBA penalty for sleeping hours (10 p.m. to 7 a.m.).
L_{dn}	Day-Night Average Noise	The 24-hour average sound level, expressed in a single decibel rating, for the period from midnight to midnight obtained after the addition of a 10 dBA penalty to sound levels for the periods between 10 p.m. and 7 a.m.
L_{eq}	Equivalent Noise Level	The average acoustic energy content of noise for a stated period of time. The L_{eq} of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The L_{eq} may also be referred to as the average sound level. L_{eq} equates to $L_{eq(1)}$ for L_{eq} averaged over one hour; e.g., $L_{eq(8)}$ equates averaged over eight hours.
L_{max}	Maximum Noise Level	L_{max} represents the maximum instantaneous noise level experienced during a given period of time. It reflects peak operating conditions and addresses the annoying aspects of intermittent noise.
L_{min}	Minimum Noise Level	L_{min} represents the minimum instantaneous noise level experienced during a given period of time. It reflects baseline operating conditions and is commonly referenced as the noise floor.
$L_1, L_{10}, L_{50}, L_{90}$	Percentile Noise Exceedance Levels	The A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 1%, 10%, 50%, and 90% of a stated time period.

Vibration Fundamentals

As described in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment* (FTA 2018), groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. In contrast to airborne noise, groundborne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving, and operation of heavy earth-moving equipment.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The relationship of PPV to RMS velocity is expressed in terms of the “crest factor,” defined as the ratio of the PPV amplitude to the RMS amplitude. Peak particle velocity is typically a factor of 1.7 to 6 times greater than RMS vibration velocity (FTA 2018). The decibel notation acts to compress the range of numbers required to describe vibration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration sensitive equipment.

The effects of groundborne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration levels exceed the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 inches per second (in/sec) PPV, while the standard for even the most sensitive and fragile structures is 0.12 in/sec PPV (FTA 2018).

In residential areas, the background vibration velocity level is usually around 50 VdB (approximately 0.0013 in/sec PPV). This level is well below the vibration velocity level threshold of perception for humans, which is approximately 65 VdB. A vibration velocity level of 75 VdB is considered to be the approximate dividing line between barely perceptible and distinctly perceptible levels for many people (FTA 2018).

Sensitive Receptors

Land uses deemed sensitive by the State of California include schools, hospitals, rest homes, and long-term care and mental care facilities, which are considered to be more sensitive to ambient noise levels than others. Many jurisdictions also consider residential uses particularly noise-sensitive because families and individuals expect to use time in the home for rest and relaxation, and noise can interfere with those activities. Some jurisdictions may also identify other noise-sensitive uses such as churches, libraries, and parks. Furthermore, sensitive noise receptors may also include threatened or endangered biological species, although many jurisdictions have not adopted noise standards for wildlife areas. Land uses that are generally not considered to be noise sensitive receptors include office, commercial, and retail developments.

4.13.2 Environmental Setting

Project Location

The project is located in the southeastern portion of Kern County, California, as shown in Figure 3-1, Project Vicinity Map. The 640-acre project site is located in an agricultural area with limited development. Half of the project site has been developed as a solid waste Facility, which has been in continuous operation since being permitted via conditional use permit in 1982. The properties adjacent to the truck haul routes are

primarily agricultural with sparse residences, particularly along Highway 58 (McKittrick Highway) west of the town of Buttonwillow, Corn Camp Road, and Highway 33 (West Side Highway). However, the truck haul routes also go through the towns of Buttonwillow and McKittrick, adjacent to schools and more densely situated residences.

Existing Noise Environment

The project site is located in an area of low population density. The existing noise environment is primarily influenced by natural noise sources such as wind and bird vocalizations, as well as by manmade noise sources including the existing landfill operation, agricultural and oil field production activities, vehicle traffic, and occasional aircraft overflights.

To document existing ambient noise levels in the study area, day-long sound levels were measured along the truck hauling routes from January 29 to 30, 2019, and from May 29 to 30, 2019. Measurements were taken at five locations to characterize existing sources of noise along the truck hauling routes as shown in **Figure 4.13-1, SLM Locations and Haul Routes**. In all five locations, traffic dominated the noise environments. The measured sound levels are summarized in Table 4.13-2 below.

Noise Sensitive Receptors






Noise sensitive receptors are generally defined as land uses where people reside or where the presence of unwanted sound may adversely affect the existing land use. The Noise Element of the Kern County General Plan considers the following as noise sensitive areas: residences, hospitals, places of worship, and schools, as well as nature and wildlife preserves, recreational areas, and parks.

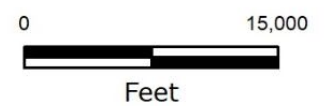
The project is not located within the sphere of influence of any airport as identified by the Kern County Airport Land Use Compatibility Plan. The nearest school to the project site is Buttonwillow Elementary at 42600 Hwy 58, Buttonwillow CA, located approximately 7.7 miles east in the community of Buttonwillow. The State of California lists schools as sensitive receptors, which are considered to be more sensitive to effects from the environment than others. As shown on Figure 4.13-1, the nearest residence is northeast of the site, approximately 2.5 miles from the northeast property boundary, and is the closest sensitive receptors to the project site; therefore, no sensitive receptors, such as private residences, schools, parks, churches, or hospitals, exist within a 1-mile radius of the project site.

Kern County Planning and Natural Resources Department
Clean Harbors, WMU
By: Clean Harbors Buttonwillow, LLC



Legend

-  SLM Locations
-  Project Site Boundary
-  Hazardous Material Truck Haul Route
-  Hazardous and Non-Hazardous Material Truck Routes
-  Non-Hazardous Material Only Truck Haul Route



Service Layer Credits: Source Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

SOURCE: Ramboll 2019
2022



FIGURE 4.13-1
SLM Locations and Haul Routes

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TABLE 4.13-2: MEASURED EXISTING SOUND LEVELS (DBA)

Location	Roadway	Time Period	Range of Hourly L_{eq}	Time Period L_{eq}	CNEL/ L_{dn}
Location 1	Highway 58, east of Corn Camp Rd and west of Elk Grove Rd	Day	56-66	63	70/70
		Night	54-70	63	
		6:00AM 7:00PM	- 60-67	64	
Location 2	Highway 58, just east of Palomas Rd	Day	58-70	67	73/73
		Night	58-73	67	
		6:00AM 7:00PM	- 64-70	68	
Location 3	Highway 58, between Marisola Ave and Miller Rd	Day	53-63	60	65/65
		Night	51-64	58	
		6:00AM 7:00PM	- 57-63	60	
Location 4	Corn Camp Road	Day	54-66	62	67/67
		Night	48-66	60	
		6:00AM 7:00PM	- 58-66	63	
Location 5	At the intersection of Highways 33 and 58	Day	58-66	64	68/68
		Night	55-66	61	
		6:00AM 7:00PM	- 61-66	65	

"Day" refers to the hours between 7 AM and 10 PM.

"Night" refers to the hours between 10 PM and 7 AM.

The hours of 6 AM to 7 PM are the expected hours of construction activities

4.13.3 Regulatory Setting

Federal

Noise Control Act of 1972

The Noise Control Act of 1972 (42 USC 4910) establishes a national policy to promote an environment for all Americans to be free from noise that jeopardizes their health and welfare. The Act establishes a means for the coordination of federal research and activities in noise control, authorizes the establishment of federal noise emissions standards for products distributed in commerce, and provides the noise-emission and noise-reduction characteristics of such products to the public.

United States Environmental Protection Agency, Recommendations in Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety (NTIS 550\9-74-004, USEPA, Washington, D.C., March 1974)

In response to a federal mandate, the U.S. Environmental Protection Agency (USEPA) provided guidance in *Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety* (NTIS 550\9-74-004, USEPA, Washington, D.C., March 1974), commonly referenced as the Levels Document, that establishes an L_{dn} of 55 dBA as the requisite level, with an adequate margin of safety, for areas of outdoor uses, including residences and recreation areas. The Levels Document does not constitute USEPA regulations or standards but identifies safe levels of environmental noise exposure without consideration of costs for achieving these levels or other potentially relevant considerations. The Levels Document is intended to “provide State and local governments as well as the Federal government and the private sector with an informational point of departure for the purpose of decision-making.” USEPA is careful to stress that the recommendations contain a factor of safety and do not consider technical or economic feasibility issues and, therefore, should not be construed as standards or regulations.

Occupational Safety and Health Administration Occupational Noise Exposure Hearing Conservation Amendment (Federal Register 48 [46], 9738–9785, 1983)

The Occupational Safety and Health Administration (OSHA) Occupational Noise Exposure Hearing Conservation Amendment (*Federal Register* 48 [46], 9738–9785, 1983) stipulates that protection against the effects of noise exposure shall be provided for employees when sound levels exceed 90 dBA over an 8-hour exposure period. Protection shall consist of feasible administrative or engineering controls. If such controls fail to reduce sound levels to within acceptable levels, personal protective equipment shall be provided and used to reduce exposure of the employee. Additionally, a Hearing Conservation Program must be instituted by the employers whenever employee noise exposure equals or exceeds the action level of an 8-hour time-weighted average sound level of 85 dBA. The Hearing Conservation Program requirements consist of periodic area and personal noise monitoring, performance and evaluation of audiograms, provision of hearing protection, annual employee training, and record keeping.

State

The California Department of Health Services has studied the correlation of noise levels and their effects on various land uses and established guidelines for evaluating the compatibility of various land uses, for the noise elements of local general plans, as a function of community noise exposure. The guidelines are the basis for most noise element land use compatibility guidelines in California.

The State requires all municipalities to prepare and adopt a comprehensive long-range general plan. General plans must contain a noise element (California Government Code [CGC] Section 65302(f) and Health Safety Code Section 46050.1). The requirements for the noise element of the general plan include describing the noise environment quantitatively using a cumulative noise metric, such as CNEL or DNL; establishing noise/land use compatibility criteria; and establishing programs for achieving and/or maintaining land use compatibility. Noise elements should address all major noise sources in the

community, including mobile and stationary noise sources. In California, most counties and cities have also adopted noise ordinances, which serve as enforcement mechanisms for controlling noise.

The State of California Governor’s Office of Planning and Research (OPR) land use compatibility for community noise environment chart (OPR 2017) identifies the normally acceptable range for several different land uses, as shown in **Table 4.13-3, Land Use Compatibility for Community Noise Environment**. Persons in low-density residential settings are most sensitive to noise intrusion, where noise levels of 60 dBA CNEL and below are considered “acceptable.” For land uses such as schools, libraries, churches, hospitals, and parks, acceptable noise levels go up to 70 dBA CNEL.

State CEQA *Guidelines* (Public Resources Code [PRC] Section 21000 et seq.) requires the identification of “significant” environmental impacts and their feasible mitigation. Section XI of State CEQA *Guidelines* Appendix G (California Code of Regulations [CCR] Title 14, Appendix G) lists some indicators of potentially significant impacts, which are included below under the heading “Thresholds of Significance.”

TABLE 4.13.3-3: LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENT

Land Use Category	Community Noise Exposure - L_{dn} or CNEL (dBA)								
	50	55	60	65	70	75	80		
Residential – Low Density Single Family, Duplex, Mobile Home	█	█	█	█					
			█	█	█	█			
						█	█		
							█	█	█
Residential – Multi-Family	█	█	█	█	█				
				█	█	█			
						█	█		
							█	█	█
Transient Lodging – Motel/Hotel	█	█	█	█	█				
				█	█	█			
						█	█	█	
								█	█
Schools, Libraries, Churches, Hospitals, Nursing Homes	█	█	█	█	█	█			
				█	█	█			
						█	█	█	
									█
Auditorium, Concert Hall, Amphitheaters	█	█	█	█	█	█			
						█	█	█	█

TABLE 4.13.3-3: LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENT

Land Use Category	Community Noise Exposure - L_{dn} or CNEL (dBA)						
	50	55	60	65	70	75	80
Sports Arena, Outdoor Spectator Sports	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable
	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Playgrounds, Neighborhood Parks	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable
	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable
	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Office Buildings, Business, Commercial and Professional	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable
	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Industrial, Manufacturing, Utilities, Agriculture	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable
	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable
	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development generally should not be undertaken.

Source: OPR 2017.

Local

Kern County General Plan

The *Kern County General Plan Noise Element* is a mandatory element as required by California Government Code Section 65302(f). The State requires that local jurisdictions prepare statements of policy indicating their intentions regarding noise and noise sources, establish desired maximum noise levels according to land use categories, set standards for noise emission from transportation and fixed-point sources, and prepare implementation measures to control noise. Noise Elements are prepared in accordance with *Guidelines for the Preparation and Content of Noise Elements of the General Plan*, published by the California Office of Noise Control in 1976.

The *Kern County General Plan Noise Element* provides goals, policies, and implementation measures applicable to noise, which, as related to the project, are provided below. The major purpose of the County's Noise Element is to establish reasonable standards for maximum noise levels desired in Kern County, and to develop an implementation program which could effectively mitigate potential noise problems and not subject residential or other sensitive noise land uses to exterior noise levels in excess of 65 dBA L_{dn} , and interior noise levels in excess of 45 dBA L_{dn} .

Applicable goals, policies, and implementation measures from the *Kern County General Plan - Noise Element* relevant to the proposed project are summarized below.

Chapter 3. Noise Element

3.3 Sensitive Noise Areas

Goals

Goal 1: Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.

Goal 2: Protect the economic base of Kern County by preventing the encroachment of incompatible land uses near known noise producing roadways, industries, railroads, airports, oil and gas extraction, and other sources.

Policies

Policy 1: Review discretionary industrial, commercial, or other noise-generating land use projects for compatibility with nearby noise-sensitive land uses.

Policy 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 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

Measure A: Utilize zoning regulations to assist in achieving noise-compatible land use patterns.

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.

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} .

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.

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.

Measure J: Develop implementation procedures to ensure that requirements imposed pursuant to the findings of an acoustical analysis are conducted as part of the project permitting process.

Kern County Zoning Ordinance

Section 19.80.030.S(1) of the Kern County Zoning Ordinance restricts noise generated by commercial or industrial uses within 500 feet of a residential use or residential zone district. The commercial or industrial use shall not generate noise that exceeds an average 65 dB Ldn between the hours of 7 a.m. and 10 p.m., and shall not generate noise that exceeds 65 dB, or which would result in an increase of 5 dB or more from ambient sound levels, whichever is greater, between the hours of 10 p.m. and 7 a.m. Commercial or industrial facilities that are located in the M-3 zone district are exempt from these noise-generation restrictions.

Kern County Code of Ordinances

The Kern County Code of Ordinances, Chapter 8.36 (Noise Control), includes acceptable hours of construction, and limitations on construction related noise impacts on adjacent sensitive receptors.

Section 8.36.020 – Prohibited sounds

It is unlawful for any person to do, or cause to be done, any of the following acts within the unincorporated areas of the county:

- H. To create noise from construction, between the hours of nine (9:00) p.m. and six (6:00) a.m. on weekdays and nine (9:00) p.m. and eight (8:00) a.m. on weekends, which is audible to a person with average hearing faculties or capacity at a distance of one hundred fifty (150) feet from the construction site, if the construction site is within one thousand (1,000) feet of an occupied residential dwelling except as provided below:
 - 1. The resource management director or a designated representative may for good cause exempt some construction work for a limited time.
 - 2. Emergency work is exempt from this section.

Groundborne Vibration

There are currently no Federal, State, or local regulatory standards for groundborne vibration. However, the California Department of Transportation (Caltrans) has developed vibration criteria based on potential structural damage risks and human annoyance (Caltrans 2020). Caltrans' threshold criteria pertaining to building damage and human annoyance, for continuous and transient events, are summarized in **Table 4.13-4, Guideline Vibration Damage Potential Threshold Criteria**, and **Table 4.12-5, Guideline Vibration Annoyance Potential Criteria**, respectively below.

As indicated in **Table 4.12-4, Guideline Vibration Damage Potential Threshold Criteria**, the threshold at which there is a risk to normal structures from continuous or frequent vibration sources is 0.3 in/sec PPV for older residential structures and 0.5 in/sec PPV for newer building construction. A threshold of 0.5 in/sec PPV also represents the structural damage threshold applied to older structures for transient vibration sources.

TABLE 4.13.33-4: GUIDELINE VIBRATION DAMAGE POTENTIAL THRESHOLD CRITERIA

Structure and Condition	Transient Sources (in/sec PPV)	Continuous/ Frequent Intermittent Sources (in/sec PPV)
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
Newer residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2020.

Notes: Transient sources create a single, isolated vibration event, such as blasting or ball drops. Traffic, train, and most construction vibrations are considered continuous.

With regard to human perception, vibration levels would begin to become distinctly perceptible at levels of 0.04 in/sec PPV for continuous or frequent vibration sources and 0.25 in/sec PPV for transient vibration sources, as shown in **Table 4.12-5, Guideline Vibration Annoyance Potential Criteria**. Continuous vibration levels are considered annoying for people in buildings at levels of 0.2 in/sec PPV.

TABLE 4.13.3-5: GUIDELINE VIBRATION ANNOYANCE POTENTIAL CRITERIA

Human Response	Transient Sources (in/sec PPV)	Continuous/ Frequent Intermittent Sources (in/sec PPV)
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.1
Annoying to people in buildings	--	0.2
Severe	2.0	0.4

Source: Caltrans 2020.

Notes: Transient sources create a single, isolated vibration event, such as blasting or ball drops. Traffic, train, and most construction vibrations are considered continuous.

4.13.4 Impacts and Mitigation Measures

This section evaluates the impacts related to noise that may be generated during construction and operation of the project. It describes the noise-sensitive receptors located on and adjacent to the project sites that may be affected and identifies the thresholds used to determine 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

The California Environmental Quality Act (CEQA) requires determination of the significance of noise impacts associated with proposed projects. The process of assessing the significance of noise impacts associated with the proposed project involves establishing thresholds at which significant impacts on noise-sensitive uses may occur. Noise levels associated with construction and operational activities related to the proposed project were predicted and compared to these significant thresholds. Potential sources of noise associated with the proposed project include:

- Construction equipment (i.e., wheel loaders, bulldozers, a typical truck loading cycle);
- On-site operation of the landfill (i.e., off-road equipment similar to construction); and
- Off-site haul truck traffic.

The proposed project's potential noise and vibration impacts have been evaluated using a variety of resources, including the project's Noise Study, provided in Appendix I of this EIR. The noise levels generated during project construction and operation from the various noise sources were calculated based on data from standard references. Noise levels associated with the proposed project were evaluated against the Kern County noise standards established in the *Kern County General Plan*.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Short-Term Construction Noise

The *Kern County General Plan* Noise Element establishes a threshold of 65 dBA Ldn for exterior noise levels for sensitive receptors. Additionally, the Kern County Municipal Code restricts construction activities from occurring between the hours of 9:00 p.m. to 6:00 a.m. on weekdays and 9:00 p.m. to 8:00 a.m. on weekends for construction sites located within 1,000 feet of an occupied residential dwelling. Kern County does not have regulations restricting construction noise levels.

Project construction will include construction of the following features: (1) Administration Building; (2) WMU 36; (3) WMU 37; (4) WMU 38; (5) tank treatment buildings (TTBs); and (6) Paint Recycling Building. The construction of the project would require various pieces of construction equipment. **Table 4.13-6, *Maximum Noise Levels of Project Construction Equipment***, lists the anticipated construction equipment required for project construction and the corresponding operational noise level, based on a usage factor, generated at a reference distance of 50 feet from the equipment.

As shown in Table 4.13-6, *Maximum Noise Levels of Project Construction Equipment*, the maximum noise levels for construction equipment expected to be used for project construction ranges from approximately 74 to 85 dBA L_{max} at 50 feet.

TABLE 4.13-6: MAXIMUM NOISE LEVELS OF PROJECT CONSTRUCTION EQUIPMENT

Project Feature	Construction Phase Name	Equipment Type	Number of Equipment	Operating Hours (hrs/day)	Noise Level (dBA) at 50 feet from Source
Admin Buildings	Site Preparation	Grader	1	8	85
		Tractors/Loaders/Backhoes	1	8	80
	Grading	Concrete/ Industrial Saws	1	8	76
		Rubber Tired Dozers	1	1	85
		Tractors/Loaders/Backhoes	2	6	80
	Paving	Cement and Mortar Mixers	4	6	N/A
		Pavers	1	7	85
		Rollers	1	7	85
		Tractors/Loaders/Backhoes	1	7	80
	WMU 36	Site Preparation	Dozer	1	10
Excavation/ Grading of Landfill		Loader	1	10	80
		Scraper	6	10	85
		Dozers	2	10	85
		Compactor	1	10	82
		Water Truck	2	10	84
Plastic Liner Installation		Forklifts	1	10	N/A

TABLE 4.13-6: MAXIMUM NOISE LEVELS OF PROJECT CONSTRUCTION EQUIPMENT

Project Feature	Construction Phase Name	Equipment Type	Number of Equipment	Operating Hours (hrs/day)	Noise Level (dBA) at 50 feet from Source	
WMU 37	Site Preparation	Loader	1	10	80	
		Scrapers	4	10	85	
		Dozers	2	10	85	
		Compactor	1	10	82	
		Water Truck	2	10	84	
	Excavation/ Grading of Landfill	Loader	1	10	80	
		Scraper	8	10	85	
		Dozers	2	10	85	
		Compactor	1	10	82	
		Water Truck	2	10	84	
	Plastic Liner Installation	Forklifts	1	10	N/A	
	WMU 38	Site Preparation	Dozer	1	10	85
		Excavation/ Grading of Landfill	Loader	1	10	80
			Scrapers	6	10	85
Dozers			2	10	85	
Compactor			1	10	82	
Water Truck			2	10	84	
Plastic Liner Installation		Forklifts	1	10	N/A	
Treatment Tank Buildings		Site Preparation	Graders	1	8	85
	Tractors/Loaders/Backhoes		1	8	80	
	Grading	Concrete/ Industrial Saws	1	8	76	
		Rubber Tired Dozers	1	1	85	
		Tractors/Loaders/Backhoes	2	6	80	
	Building Construction	Cranes	1	4	83	
		Forklifts	2	6	N/A	
		Tractors/Loaders/Backhoes	2	8	80	
	Paving	Cement and Mortar Mixers	4	6	N/A	
		Pavers	1	7	85	
Rollers		1	7	85		

TABLE 4.13-6: MAXIMUM NOISE LEVELS OF PROJECT CONSTRUCTION EQUIPMENT

Project Feature	Construction Phase Name	Equipment Type	Number of Equipment	Operating Hours (hrs/day)	Noise Level (dBA) at 50 feet from Source
		Tractors/Loaders/Backhoes	1	7	80
Paint Recycle Building	Site Preparation	Graders	1	8	85
		Tractors/Loaders/Backhoes	1	8	80
	Grading	Concrete/ Industrial Saws	1	8	76
		Rubber Tired Dozers	1	1	85
		Tractors/Loaders/Backhoes	2	6	80
	Building Construction	Cranes	1	4	83
		Forklifts	2	6	N/A
		Tractors/Loaders/Backhoes	2	8	80
	Paving	Cement and Mortar Mixers	4	6	N/A
		Pavers	1	7	85
		Rollers	1	7	85
		Tractors/Loaders/Backhoes	1	7	80

Source: FTA 2018.

WMU 36 will be constructed in two stages and filled sequentially. The liner and leachate collection and removal systems of WMUs 37 and 38 will each be constructed in one phase. Construction will include excavation, placement and compaction of engineered fill and prepared subgrade, placement of drainage aggregate and operations layer material, installation of piping, lighting, and installation of temporary erosion control features. Construction is expected to begin within a year of receiving all the necessary permits and approvals for construction and take an estimated seven months. The construction workforce would consist of 8 to 35 workers over the seven months construction period.

Construction of the TTBs is expected to begin within six months of receiving all the necessary permits and approvals for construction and take an estimated one year. The construction workforce would consist of 8 to 65 workers over the one-year construction period.

Long-Term Operational Noise

The Facility’s normal hours of operation are 9:00 AM to 5:00 PM, Monday through Friday, closed Saturday and Sunday; however, special arrangements can be made for off-hour acceptance. The proposed project would use the equipment listed in Table 4.13-7, *Typical Landfill Operation Equipment*, for continued landfill operations. The project proposes to increase truck traffic for non-hazardous waste by 100% once the new WMUs are complete and additional non-hazardous materials can be accepted. Hazardous waste disposal and associated trucks are expected to stay at the same level.

TABLE 4.13-7: TYPICAL LANDFILL OPERATION EQUIPMENT

Noise Source	Typical Noise Level (dBA) at 50 feet from Source
Dozer or Tractor	82
Compactor	83
Front-end Loader	79
Backhoe	78
Scraper/Grader	85
Truck (Dump, Water, Fuel, Mechanic, and Grease)	84

Source: FTA 2018.

Off-Site Traffic

The increase in waste capacity of the proposed project is expected to generate additional waste truck traffic to and from the project site. Operation of the expanded Facility could result in permanent increases in noise levels at locations near primary roads used to access the site. In the Noise Study, an increase of 5 dBA or more is considered a ‘substantial increase’ in noise levels.

Noise impacts were analyzed along three primary truck routes with adjacent sensitive receivers. The roadways evaluated include Highway 33 (West Side Highway) south of Lokern Road, Corn Camp Road north of Highway 58, and Highway 58 east of Lokern Road. Sound level measurements were taken adjacent to each of the roadways evaluated to represent existing traffic noise levels. The noise impact analysis compares the future traffic noise levels (i.e., calculated from estimated project-related truck volumes) to the existing noise identified by sound level measurements.

Project-related haul truck volumes from the Transportation Impact Study (Appendix J) were used. The traffic study estimated that a maximum of 676 truck trips (338 arriving and 338 departing) would be generated by the project. Out of the overall truck volumes, 10 truck trips would be expected to arrive at the site between 6:00 AM and 7:00 AM, considered a “nighttime” hour by the noise code, and 666 truck trips would arrive or depart during the daytime hours between 7:00 AM and 10:00 PM. The resulting average number of truck trips that would occur during each daytime and nighttime hour is 44.4 and 1.1 trips, respectively.

To assess the potential for truck noise impacts along the primary access routes to and from the site, the project-related haul trucks were distributed over the primary access routes to and from the site using the regional truck trip distribution data provided in the Transportation Impact Study. Based on the Traffic Study, 15% of the truck trips would travel on Highway 33 south of Lokern Road (through the town of McKittrick) while 78% of truck traffic would travel on Highway 58 east of Lokern Road. As previously mentioned, hazardous waste trucks are prohibited on Highway 58 through the town of Buttonwillow, and half of the trucks are assumed to be carrying hazardous waste. Therefore, half of the truck volumes on Highway 58 east of Lokern Road are assumed to travel on Corn Camp Road, while the remaining trucks travel through the town of Buttonwillow.

Projected hourly traffic noise levels (Leq) at the sensitive receivers nearest each roadway, represented by the Sound Measurement Locations depicted in Figure 4.13-1, were estimated using the FHWA’s Traffic

Noise Model (TNM) v2.5 Lookup Table based on truck traffic volumes, posted speed limits, and setback distances from the roadways to the sensitive receivers. The setback distances from the roadway centerlines to the nearest sensitive receivers and the existing speed limits for each roadway segment were derived through site observations and review of Google Earth Satellite images. The 24-hour day-night sound levels (L_{dn}) were calculated from the project-related daytime and nighttime hourly Leq and are displayed in Table 4.13-8. Truck-related noise impacts are assessed by comparing overall (i.e., cumulative) traffic noise levels with the project to the measured existing noise levels to identify project related increases. The cumulative L_{dn} are calculated by adding the modeled project related traffic noise levels to the measured existing levels. The projected increases in noise levels due to the project are the differences between the cumulative L_{dn} and the existing L_{dn}.

TABLE 4.13-8: PROJECT RELATED TRUCK INCREASES OVER AMBIENT LEVELS (DBA)

Location	Roadway	Modeled Hourly Project L _{eq}		L _{dn}		Cumulative	Increase
		Day	Night	Existing	Project		
Location 1	Highway 58, east of Corn Camp Rd and west of Elk Grove Rd	59	43	70	57	70	0
Location 2	Highway 58, just east of Palomas Rd	59	43	73	58	73	0
Location 3	Highway 58, between Marisola Ave and Miller Rd	60	43	65	58	66	1
Location 4	Corn Camp Road	61	44	67	59	67	1
Location 5	At the intersection of Highways 33 and 58	58	42	68	56	68	0

Construction Groundborne Vibration

Groundborne vibration is almost exclusively a concern for buildings and their inhabitants, and is rarely perceived as a problem outdoors, where the motion may be discernable, but without the effects associated with the shaking of a building there is less adverse reaction. Groundborne vibration during construction activity is temporary and would cease to occur after project construction is completed. **Table 4.12-9, *Vibration Source Amplitudes for Construction Equipment***, shows the vibrational levels for typical construction equipment at a reference distance of 25 feet.

TABLE 4.13.9: VIBRATION SOURCE AMPLITUDES FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet	L_v (VdB)^a at 25 feet
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Post Driver^b	0.161	92
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer^b	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Notes:

^a RMS vibration velocity in decibels (VdB) re 1 μin/sec.

^b Calculated based on a reference level of 0.65 in/sec PPV for a 36,000 foot-pounds (ft-lbs) pile driver and a maximum energy level of 2,200 ft-lbs for post drivers.

Equipment shown in **bold** is expected to be used on the project site.

μin/sec = micro-inches per second
 FTA = Federal Transit Administration
 in/sec = inches per second

L_v = velocity in decibels
 PPV = peak particle velocity
 RMS = root-mean-square
 VdB = vibration velocity in decibels

Source: FTA 2018

Operational Vibration Impacts

Vibration sources associated with long-term continued operation of the landfill system would be similar to the sources of groundborne vibration and noise during construction—the use and movement of heavy construction equipment and hauling trucks.

Thresholds of Significance

The Kern County California Environmental Quality Act (CEQA) Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA *Guidelines*, to determine if a project could potentially have a significant adverse effect on noise.

A project would have a significant impact on noise if it would result in:

- a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- b. Generation of excessive groundborne vibration or groundborne noise levels;

- c. 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.

Kern County determined in the Notice of Preparation/Initial Study (NOP/IS) that the following environmental issue area would result in no impact or a less-than-significant impact and, therefore, is scoped out of this EIR. Please refer to Appendix A of this EIR for a copy of the NOP/IS and additional information regarding this issue area:

- 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.

As discussed in the NOP/IS, the proposed project is not located within the boundaries of an Airport Influence Area, as identified in the Kern County ALUCP. The closest public airport is the Elk Hills-Buttonwillow Airport, located approximately eight miles to the east. Therefore, there would be no significant impact resulting from people residing or working within a Kern County ALUCP or in the vicinity of a private airstrip being exposed to excessive noise levels from the project.

Project Impacts and Mitigation Measures

Impact 4.13-1: The project could result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

The project site consists of an operational landfill and a vacant expansion site, adjacent to agricultural activities, and surrounded by other industrial-type (oil field) land uses. The existing permitted operation utilizes heavy construction equipment to push and compact waste and to move and maintain soils (e.g., bulldozers, scrapers, water trucks). Heavy truck traffic is a normal part of the permitted activities. There is no record of noise complaints from the surrounding landowners. As required by the *Kern County General Plan*, the project site is surrounded by landfill buffer, which prevents the encroachment of land uses that would be adversely affected by construction and operation noise. Implementation of the proposed project would generate noise during construction and operational activities. A discussion of construction and operational noise associated with buildout of the proposed project is provided below.

Construction

Construction Activities

To assess potential construction noise impacts related to the proposed project, the Noise Study considered if generation of sound from construction activities would exceed noise standards identified by Kern County, or if construction-related noise would likely result in a substantial temporary increase at the nearest noise-sensitive receivers.

Kern County Code Section 8.36.020(H) restricts construction-related noise if the noise generated is audible at a distance of 150 feet from the construction site and the site is within 1,000 feet of an occupied residential

dwelling. The nearest sensitive receptor to the project site is approximately 2.5 miles to the northeast of the site, well over the 1,000 foot distance restricted by Kern County Code Section 8.36.020(H). Kern County does not specify what would constitute a “substantial temporary increase,” but Section 19.80.030(S) of the Kern County Zoning Code does stipulate that non-mobile sources related to operation of a Facility within 500 feet of property developed and zoned for residential use (E, R-1, R-2, and R-3) should not result in an increase of 5 dBA or more over ambient levels between 10:00 PM and 7:00 AM. This section of the Code does not apply to this project since the project site is over six miles from the nearest residential zones (i.e., E or Estate zones and R-1 or Low-Density Residential zones in Buttonwillow and McKittrick, east and south of the site, respectively). Furthermore, the nearest residential receiver to the site is approximately 2.5 miles from the northeast property boundary, and on-site construction activities are not expected to be audible at this residence.

Additionally, implementation of Mitigation Measure MM 4.13-1 would require construction activities to be conducted in accordance with applicable local noise standards (i.e., construction activities will not take place before 6:00 a.m. or after 9:00 p.m. on weekdays and 8:00 a.m. or after 9:00 p.m. on weekends and would not exceed established thresholds for sensitive receptors. Therefore, implementation of Mitigation Measure MM 4.13-1 would further reduce impacts from construction of the project.

Operation

Operational Activities

To assess potential operational noise impacts related to the proposed project, the Noise Study considered if generation of sound from operational activities would exceed noise standards identified by Kern County, or if operational noise would be likely to result in a substantial permanent increase over ambient levels at noise-sensitive receivers.

As described above, Kern County’s Noise Control Ordinance Section 8.36 does not identify specific noise limits related to operation of a Facility. Section 19.80.030(S) of the Kern County Zoning Code indicates that non-mobile sources of noise within 500 feet of property developed and zoned for residential use (E, R-1, R-2, and R-3) shall not exceed 65 Ldn. The Code also states that between the hours of 10:00 PM and 7:00 AM, the source should not result in an increase of 5 dBA or more over ambient levels. The nearest residentially zoned properties are over six miles from the project site. In addition, there are no residences within 500 feet of the site, and the nearest residence is 2.5 miles northeast of the site and zoned A for Agricultural use. Kern County does not identify a “substantial permanent increase,” but Section 19.80.030(S) of the Kern County Zoning Code stipulates that non-mobile sources operating within 500 feet of property developed and zoned for residential use (E, R-1, R-2, and R-3) should not result in an increase of 5 dBA or more over ambient levels. This section of the Code does not strictly apply to this Facility since the site is over six miles from the nearest residential zones (i.e., E or Estate zones and R-1 or Low-Density Residential zones in Buttonwillow and McKittrick, east and south of the site, respectively). As mentioned above, the nearest noise-sensitive receiver to the Facility is a residence 2.5 miles northeast of the site, and on-site equipment noise is not expected to be audible at this residence. Therefore, no significant noise impacts are expected from on-site equipment during operations.

Off-Site Traffic

Both hazardous and non-hazardous waste materials are transported to the project site by trucks. Trucks hauling hazardous waste to the site are restricted from traveling through the town of Buttonwillow.

Therefore, hazardous waste trucks arriving via Interstate 5 (I-5) to the east must use 7th Standard Road, travel south on Corn Camp Road to Highway 58 (McKittrick Highway), then proceed west to the site on Lokern Road, thereby avoiding Buttonwillow. Non-hazardous waste trucks are not restricted.

Truck-related noise impacts were assessed by comparing overall traffic noise levels with the project to the measured existing noise levels to identify project-related increases. A summary of the traffic noise levels and calculated increases are provided in **Table 4.13-8, Project Related Truck Increases Over Ambient Levels (dBA)**.

As shown in Table 4.13-9, Project Related Truck Increases Over Ambient Levels (dBA) project-related truck traffic sound levels are expected to result in increases over existing ambient levels of less than 5 dBA along all major access routes to the site, which would not be classified as a substantial permanent increase. Therefore, no significant noise impacts are anticipated due to increased truck traffic associated with the project.

Mitigation Measures

MM 4.13-1 The following measures are to be implemented to further reduce short-term noise levels associated with project construction activities:

- a. Construction equipment shall be fitted with noise-reduction features such as mufflers and engine shrouds that are no less effective than those originally installed by the manufacturer.
- b. Construction activities at the project site shall comply with the hourly restrictions for noise-generating construction activities, as specified in the County's Code of Ordinances, Chapter 8.36. Accordingly, construction activities shall be prohibited between the hours of 9:00 p.m. to 6:00 a.m. on weekdays, and between 9:00 p.m. to 8:00 a.m. on weekends. These hourly limitations shall not apply to activities where hourly limitations would result in increased safety risk to workers or the public, such as commissioning and maintenance activities that must occur after dark to ensure photovoltaic arrays are not energized; unanticipated emergencies requiring immediate attention; or security patrols.
- c. Haul trucks shall not be allowed to idle for periods greater than 5 minutes, except as needed to perform a specified function (e.g., concrete mixing).
- d. On-site vehicle speeds shall be limited to 15 miles per hour, or less (except in cases of emergency).
- e. Back-up beepers for all construction equipment and vehicles shall be broadband sound alarms or adjusted to the lowest noise levels possible, provided that the Occupational Safety and Health Administration and California Division of Occupational Safety and Health safety requirements are not violated. On vehicles where back-up beepers are not available, alternative safety measures such as escorts and spotters shall be employed.
- f. Back-up beepers for all construction equipment and vehicles shall be broadband sound alarms or adjusted to the lowest noise levels possible, provided that the

Occupational Safety and Health Administration and California Division of Occupational Safety and Health's safety requirements are not violated. On vehicles where back-up beepers are not available, alternative safety measures such as escorts and spotters shall be employed.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.13-1, temporary impacts associated with construction activities would be less than significant. Operational impacts would be less than significant.

Impact 4.13-2: The project would not generate excessive groundborne vibration or groundborne noise levels.

Groundborne vibration and groundborne noise would originate from earth movement during the construction phases of the new construction of the paint recycling building, four new tank treatment buildings and three new non-hazardous landfills, as well as from operation and maintenance of the various facilities. The existing landfill operations utilize heavy equipment and in-bound and out-bound trucks, which create some groundborne vibration. The project proposes to increase the truck traffic coming to the Facility once the new non-hazardous waste landfills are built. The project would be expected to comply with all applicable requirements for long-term operations, as well as measures to reduce excessive groundborne vibration and noise to ensure that the project would not expose persons or structures to excessive groundborne vibration.

The project site is surrounded by designated landfill buffer, which prevents the encroachment of land uses that would be adversely affected by vibrations and groundborne noise caused by construction and operation of the project. In addition, construction and operation of the various components of the project would be well over 1,000 feet from the nearest sensitive receivers. Groundborne vibration (and related groundborne noise) dissipate rapidly over distance and would be minimal to non-existent at a distance of 1,000 feet. The project is not expected to result in excessive groundborne vibration or groundborne noise levels. Therefore, impacts would be less than significant and no mitigation would be required.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.13-3: The project would not 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, ambient noise at the project sites is dominated by noise from heavy equipment associated with landfill operations, construction, and heavy-duty trucks bringing material to the landfill for disposal. Long-term noise generated by Facility operation would be consistent with noise generated by existing landfill operations. Due to the surrounding agricultural activities, resource extraction

and industrial uses, it is not anticipated that the continued operation of the existing landfill, construction and operation of the additional non-hazardous waste landfills, the new paint recycling building, and the new TTBs would result in a substantial permanent increase in ambient noise levels than what is already existing, and therefore the impacts would be considered less than significant.

The project site is surrounded by designated landfill buffer and the nearest noise-sensitive receptor is located approximately 2.5 miles from the project site. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels capable of exceeding local noise standards and impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. 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.

The cumulative setting for noise is the buildout of the *Kern County General Plan* and the other projects in the vicinity of the project. Section 3.8, *Cumulative Effects Overview*, of this EIR discusses cumulative projects within a 6-mile radius of the project. Table 3-8, *Cumulative Projects List for Kern County*, in Chapter 3 lists specific projects considered in the cumulative impact analysis.

As noted above, implementation of the proposed project would generate short-term and long-term noise during Facility construction and operation from the use and movement of heavy equipment and truck traffic. However, due to the ambient noise levels at the project sites being dominated by noise generated by the use of heavy equipment and vehicles for ongoing existing landfill operations, the approximate 2.5-mile distance between the project site and the nearest sensitive receptor, and the landfill buffer, the project's contribution to future noise levels would be minor and would not result in a cumulatively considerable contribution to cumulative noise levels or noise impacts. The noise levels associated with construction and operation of the proposed project would be consistent with the standards established by the *Kern County General Plan* and Kern County Noise Ordinance and would be further reduced with the implementation of Mitigation Measure MM 4.13-1.

No proposed projects have been identified within 6 miles of the project sites that would substantially increase cumulative noise levels. Therefore, the proposed project would not result in a significant impact on either a project-specific or cumulative basis.

Mitigation Measures

Implement Mitigation Measure MM 4.13-1.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.13-1, cumulative impacts would be less than significant.

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4.14.1 Introduction

This section of the Environmental Impact Report (EIR) describes the affected environment and regulatory setting pertaining to public services, which include fire and police protection, schools, parks, emergency medical services, and other public facilities. This section also addresses the potential impacts on public services that would result from implementation of the proposed project, and the mitigation measures to reduce these potential impacts, where applicable. Information in this section is based on numerous sources, including websites, personal correspondence, and service agency plans.

4.14.2 Environmental Setting

Existing On-Site Operations

As discussed in Section 3.6.1, *Existing Facility Features and Operations*, the existing Facility is staffed with approximately 25 employees. A fire control plan, which includes procedures to minimize hazards to human health and the environment as a result of fire, is in place at the existing Facility as outlined in the Facility's Emergency Response Plan (ERP)/Contingency Plan contained in the Hazardous Waste Facility Permit and maintained at the Facility office and security office. Security and surveillance features are also present at the existing Facility. These features include physical barriers and gates, which have been installed to control entry to the Facility; normal and emergency lighting; two-way radios; cell phones and the internal phone system; security equipment; and procedures for entry into the Facility. See Section 3.6.1, for a more detailed description of existing fire control, security and surveillance features, and the ERP.

Fire Protection

The Kern County Fire Department (KCFD) provides primary fire protection services, fire prevention, emergency medical, and rescue services to more than 800,000 people in unincorporated areas of Kern County and nine incorporated cities (i.e., the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco). KCFD operates 47 full-time fire stations within 7 battalions, and 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 is staffed with 621 permanent employees, which includes 521 uniformed firefighters (KCFD 2022a).

The project site would be served by Battalion 2 of the KCFD. This battalion comprises most of the west side of the County and predominantly covers Federal Responsibility Area (FRA) lands and State Responsibility Area (SRA) lands. The FRA area is predominantly covered by Bakersfield Bureau of Land Management (BLM), a small portion of Los Padres National Forest, and some U.S. Fish and Wildlife Service area in the Bitter Creek Wildlife Refuge. There are 455,293 SRA acres in Battalion 2. There are no large, unincorporated cities within Battalion 2 that impact the SRA areas. However, a large portion of the SRA areas within Battalion 2 are comprised of oil installations (KCFD 2009). Fire Station No. 25, located

at 100 Marisola Avenue in Buttonwillow, approximately 8.1 miles east of the site, would be the primary responder to a fire event or emergency at the project site. In the event of a major fire or where additional response support is needed, other stations would be called on to respond as necessary, including Fire Station No. 24, located at 23246 2nd Street in McKittrick, approximately 10 miles south of the project site, and Fire Station No. 26, located at 14670 Lost Hills Road in Lost Hills, approximately 17.8 miles north of the project site. Information on the three closest fire stations to the project site is provided in Table 4.14-1, *List of Nearby Fire Stations*. In rural settings similar to that of the project site, the average response time is approximately 11 minutes (CPSM 2017).

The western portion of the project site is identified as a (Local Response Area) LRA Unzoned area while the eastern portion of the project site is identified as an LRA moderate area by the California Department of Forestry and Fire Protection (CAL FIRE) (CAL FIRE 2007a). The KCFD Wildland Fire Management Plan designates a majority of the project site as being located within an Agriculture/Non-Wildland zone and within a moderate fire hazard severity zone. A portion of the project site is also designated as historical fire perimeters and historical fire ignition points in the KCFD Wildland Fire Management Plan (KCFD 2009).

Kern County has mutual-aid agreements with the Kings County Fire Department in the event that the KCFD is unable to be the primary responder of an emergency. The Kings County Fire Department has 10 fire stations located throughout Kings County. The nearest Kings County fire station to the project site is Station No. 9 in Kettleman City, approximately 54 miles northwest of the project sites.

The County applies and uses the National Fire Code set forth by the National Fire Protection Association, the California Fire Code, the California Building Code, and the Kern County Ordinance Code to regulate fire safety.

An inventory of fire facilities in the project area is provided in Table 4.14-1, *List of Nearby Fire Stations*. The table identifies each type of facility, the name and address of the facility, and the approximate distance from the project site.

TABLE 4.14-1: LIST OF NEARBY FIRE STATIONS

Agency	Facility	Address	Approximate Distance from Project Site
Kern County Fire Department	Fire Station No. 24	23246 2 nd Street McKittrick, CA 93251	10 miles south of the project site
Kern County Fire Department	Fire Station No. 25	100 Marisola Avenue Buttonwillow, CA 93206	8.1 miles east of project site
Kern County Fire Department	Fire Station No. 26	14670 Lost Hills Road Lost Hills, CA 93249	17.8 miles north of project site

Source: Kern County Firefighters 2022

Law Enforcement Protection

Kern County Sheriff's Department

The Kern County Sheriff's Office provides basic law enforcement services in the unincorporated areas of the County, which includes the project area. The Kern County Sheriff's Office enforces local, State, and federal laws and is responsible for crime prevention, field patrol (ground and air), crime investigation, the apprehension of offenders, regulation of noncriminal activity, and related support services such as patrolling off-highway vehicle recreation areas in the desert and mountainous areas of the County. Traffic and parking control functions are also provided along with some investigation of property damage reports and traffic accidents. Complete investigations are conducted for injury, fatal, intoxication-related, and hit and run accidents.

The Kern County Sheriff's Office is currently staffed with 1,202 sworn and civilian employees including 567 deputy sheriffs, 338 detention deputy positions, and 297 professional support staff (Kern County Sheriff's Office 2022a). The headquarters for the Kern County Sheriff's Office is located at 1350 Norris Road in the City of Bakersfield. The Kern County Sheriff's Office consists of 14 substations that provide patrol services (Kern County Sheriff's Office 2022b). The nearest substation that would provide service to the project site is the Buttonwillow substation (also known as North Area substation), located approximately 8 miles east of the project site, at 181 E.1st Street, Buttonwillow, California. This substation provides services to an approximately 1,500-square mile area. This includes northwestern Kern County, including the communities of Buttonwillow, Lost Hills, Belridge, Blackwell's Corner, Keck's Corner, Spicer City, Devil's Den, and the unincorporated areas around the cities of Shafter and Wasco (Kern County Sheriff's Office 2022c). Other substations in proximity to the project site are the Wasco City substation and Taft substation. Information on the three closest substations to the project site is included in Table 4.14-2, *List of Nearby Police Substations*.

TABLE 4.14-2: LIST OF NEARBY POLICE SUBSTATIONS

Agency	Facility	Address	Approximate Distance from Project Site
Kern County Sheriff's Office	Buttonwillow Substation	181 E. 1st Street Buttonwillow, CA 93206	8.1 miles east of the project site
Kern County Sheriff's Office	Wasco City Substation	748 F Street Wasco, CA 93280	29 miles southeast of the project site
Kern County Sheriff's Office	Taft Substation	315 North Lincoln Street Taft, CA 93268	26 miles northeast of the project site

Source: Kern County Sheriff's Office 2022c, 2022d, 2022e.

The Kern County Sheriff's Office strives to respond to calls as quickly as possible. Life-threatening calls that involve a danger to someone's personal safety are given priority. 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. Average response time for the Kern County Sheriff's Office is 5 minutes or less for an emergency or immediate-response incident (e.g., a crime that is in progress 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 would be longer than the average

times given above. The response time for a non-emergency call could be 8 minutes or more, depending on staffing and the number of other calls for service.

California Highway Patrol

As a major statewide law enforcement agency, the California Highway Patrol (CHP) is responsible for managing and regulating traffic for the safe, lawful, and efficient use of California highways. The CHP patrols state highways and all county roadways, enforces traffic regulations, responds to traffic accidents, and provides service and assistance to disabled vehicles (CHP 2022a). The CHP has a mutual aid agreement with the Kern County Sheriff's Office.

The CHP is divided into eight divisions that provide services in areas of California (CHP 2022b). The project site is within the jurisdiction of the Central Division, which encompasses the San Joaquin Valley with two long freeway segments, a 244-mile stretch of State Route 99 and a 275-mile stretch of Interstate 5, which run the length of the Central Division (CHP 2022c). The nearest CHP office to the project site is the Buttonwillow office, located at 29449 Stockdale Highway, located approximately 17.3 miles southeast of the site, in the community of Buttonwillow.

Medical Services/Schools/Parks/Other Facilities

Emergency and Medical Services

The Kern County Emergency Medical Services Division (EMS) is the lead agency for the EMS system in Kern County and is responsible for coordinating all system participants in the County, which includes the public, fire departments, ambulance companies, other emergency service providers, hospitals, and emergency medical technician training programs throughout Kern County. EMS includes a system of services organized to provide rapid response to serious medical emergencies, including immediate medical care and patient transport to a hospital setting. EMS covers day-to-day emergencies, disaster medical response planning and preparation, and preventive health care. EMS also provides certification and recertification for emergency medical technicians, paramedics, specialized nurses, and specialized dispatchers (EMS 2022).

The closest hospital to the project site is the Mercy Hospital Southwest–Bakersfield, located at 400 Old River Road, Bakersfield, approximately 30 miles southeast of the project site. The next closest hospital to the project site is the Mercy Hospital Downtown–Bakersfield, located at 2215 Truxtun Avenue, Bakersfield, approximately 34.9 miles southeast of the project site.

Schools

There are 35 elementary school districts, eight unified school districts (providing elementary and high school facilities), four high school districts, and two community college districts in Kern. Additionally, California State University, Bakersfield, which is part of the California State University system, is in southwest Bakersfield. The Buttonwillow Union Elementary School is located approximately 7.7 miles east of the project site, at 42600 CA-58, Buttonwillow, California 93206. The McKittrick Elementary School is located approximately 6 miles south of the project site, at 23250 2nd St, McKittrick, California 93251. Aside from these two elementary schools, there are no schools within a 10-mile radius of the project site.

Buttonwillow Union Elementary School is part of the Buttonwillow Union School District, which serves approximately 326 students (California Department of Education 2022). McKittrick Elementary School is in the McKittrick Elementary School District, which serves approximately 74 students (California Department of Education 2022).

Parks

The Kern County Parks and Recreation Department manages an extensive system of large regional parks designed to serve the entire countywide population, and small neighborhood and community parks intended primarily to meet the recreational needs of nearby residents in unincorporated communities. Kern County Parks and Recreation manages 8 regional parks, totaling 4,282 acres, and 40 neighborhood parks, totaling 293 acres.

In addition to the neighborhood and community parks, the Kern County Parks and Recreation Department operates several public buildings available for senior, veteran, and recreational purposes. There are several Parks and Recreation Districts that provide facilities for the residents of some communities to supplement Kern County facilities or provide services that are not otherwise offered.

Several incorporated Cities manage park and recreation facilities. The State of California operates three parks in Kern County. The U.S. Forest Service maintains picnic grounds and overnight camping facilities in the Los Padres and Sequoia National Forests. The U.S. Army Corps of Engineers operates and maintains many of the facilities around Lake Isabella Reservoir. The U.S. Bureau of Land Management oversees a campground and other recreational areas, including the Pacific Crest Trail system, through the County.

The Buttonwillow Recreation and Park District, which includes a park and baseball fields, is located approximately 8.7 miles east of the project site at 556 Milo Avenue in Buttonwillow.

Other Public Facilities

Other public facilities include library facilities, post office facilities, and courthouses. The Kern County Library has 24 branches and 2 mobile libraries, which serve 850,000 residents within the County, including incorporated municipalities (Kern County Library 2022). Additionally, there are currently 39 post offices that serve the County (USPS 2022). Furthermore, there are currently 13 facilities serving the Superior Court of California in Kern County (Superior Court of California 2019).

4.14.3 Regulatory Setting

Federal

There are no applicable federal regulations for this issue area.

State

California Fire Code

The 2022 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against the hazards of fires, explosions, and dangerous conditions in new and existing buildings, structures, and premises. The California Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the California Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of buildings and structures throughout California. The California 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 areas.

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 SRAs. CAL FIRE develops regulations and issues fire-safe clearances for land within a fire district of the SRA. More than 31 million acres of California's privately owned wildlands are under CAL FIRE's jurisdiction (CAL FIRE 2022b).

CAL FIRE adopted Fire Hazard Severity Zone maps for the SRAs in November 2007. Fire hazard is a way to measure physical fire behavior so that people can predict the damage a fire is likely to cause. Fire hazard measurement includes the speed at which a wildfire moves, the amount of heat the fire produces, and the burning fire brands that the fire sends ahead of the flaming front. The western portion of the project site is located within an LRA Unzoned area while the eastern portion of the project site is located within an LRA moderate area (CAL FIRE 2007a).

In addition to wildland fires, CAL FIRE's planning efforts involve responding to other types of emergencies, including medical aid, hazardous material spills, swift-water rescues, search and rescue missions, civil disturbances, train wrecks, floods, and earthquakes. Through contracts with local governments, CAL FIRE provides emergency services in 36 of California's 58 counties (CAL FIRE 2022b).

Local

Kern County General Plan

The project site is located within the boundaries of Kern County, under the goals and policies of the Kern County General Plan. The policies, goals, and implementation measures in the Kern County General Plan for public services 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, Conservation and Open Space Element

1.4 Public Facilities and Services

Policies

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

Policy 6: The County will ensure adequate fire protection to all Kern County residents.

Policy 7: The County will ensure adequate police protection to all Kern County residents.

Implementation Measures

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.

Measure J: Ensure that the Superintendent of Schools and the respective school districts are informed of development proposals and are afforded the opportunity of evaluating their potential effect on the physical capacity of school facilities.

Measure L: Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in the County shall not be approved unless adequate fire protection facilities and resources can be provided.

1.10 General Provisions

Goal

Goal 1: Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving viable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

1.10.1 Public Services and Facilities

Policies

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

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

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

Chapter 4. Safety Element

4.1 Introduction

Goals

Goal 1: Minimize injuries and loss of life and reduce property damage.

Goal 2: Reduce economic and social disruption resulting from earthquakes, fire, flooding, and other geologic hazards by assuring the continuity of vital emergency public services and functions.

Goal 5: Ensure the availability and effective response of emergency services following a catastrophic event.

Goal 7: Ensure that adequate emergency services and facilities are available to the residents of Kern County through the coordination of planning and development of emergency facilities and services.

Goal 8: Reduce the public's exposure to fire, explosion, blowout, and other hazards associated with the accidental release of crude oil, natural gas, and hydrogen sulfide gas.

4.6 Wildland and Urban Fire

Policies

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

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

Policy 4: Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.

Policy 6: All discretionary projects shall comply with the adopted fire code and the requirements of the fire department.

Implementation Measure

Measure A: Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

Kern County Fire Department Wildland Fire Management Plan

The KCFD Wildland Fire Management Plan assesses the wildland fire situation throughout the SRA within the County. The Wildland Fire Management Plan includes stakeholder contributions and priorities, and

identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire planning area. The Wildland Fire Management Plan assesses the existing levels of wildland protection services and identifies high-risk and high-value areas, which are potential locations for costly and damaging wildfires. The plan also ranks the areas in terms of priority needs and prescribes what can be done to reduce future costs and losses. The KCFD Wildland Fire Management Plan designates a majority of the project site as being located within an Agriculture/Non-Wildland zone (KCFD 2009). The western portion of the project site is located within an LRA Unzoned area while the eastern portion of the project site is located within an LRA moderate area (CAL FIRE 2007a).

Kern County Fire Department Hazards Mitigation Plan

The purpose of the KCFD Multi-Jurisdiction Hazard Mitigation Plan is to reduce or eliminate long-term risk to people and property from natural hazards and their effects in Kern County. The Hazard Mitigation Plan includes specific recommendations for actions that can mitigate future disaster losses, and provides a review of the County's current capabilities to reduce hazards impacts. This multi-jurisdictional plan includes Kern County and the incorporated municipalities of Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. The plan also covers 53 special districts that include school, recreation and park, water, community service, and other districts. The plan has been formally adopted by each participating entity and is required to be updated a minimum of every 5 years (KCFD 2020).

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 2019 California Fire Code and the 2018 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.

Kern County Fire Department Unit Strategic Fire Plan

The KCFD Strategic Fire Plan, updated in April of 2022, is the most current document that assesses the wildland fire situation throughout the SRA within Kern County. Similar to other plans, this document includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire planning area. The plan provides for an analysis of fire hazards, assets at risk, and level of services to assess the existing levels of wildland protection services; the plan also identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires. The plan gives an overview of KCFD battalions, ranks these areas in terms of priority needs, and identifies the areas of the SRA. According to the plan, 69% of Kern County is within an SRA. The County is divided into into six different fuel management areas: Tehachapi, Western Kern, Northern Kern, Mt. Pinos Communities, Kern River Valley, and Valley/Foothill. The project site is located within Battalion 2 (Western Kern) which is composed of most of the west side of Kern County. West of

State Highway 33 and most of what is adjacent to State Highway 166 is either SRA or Federal Responsibility Area (FRA) (KCFD 2022b).

Kern County Office of Emergency Services Hazards Mitigation Plan

The purpose of the Kern County Office of Emergency Services (KCOES) Kern Multi-Jurisdictional Hazard Mitigation Plan is to reduce or eliminate long-term risk to people and property from natural hazards and their effects in Kern County. The plan includes specific recommendations for actions that can mitigate future disaster losses, as well as a review of the County's current capabilities to reduce hazards impacts. This multi-jurisdictional plan includes Kern County, and the incorporated municipalities of Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco. The plan also covers 53 special districts that include school, recreation and park, water, community service, and other districts. The plan has been formally adopted by each participating entity and is required to be updated a minimum of every 5 years (KCOES 2020).

Capital Improvement Plan

A proposed Countywide Capital Improvement Plan (CIP) was presented to the Kern County Board of Supervisors on October 9, 2007, and adopted in 2008. The CIP represents the best current understanding regarding new public facilities that will be needed to serve projected development in the County through 2030. The scope of services includes parks, libraries, Sheriff's Office (public protection and investigation), fire department, animal control, public health, landfill/transfer facilities, and general government. Roads and sewer costs, as well as related impacts are not part of the CIP. The program includes three phased components:

- **Phase One:** Develop a conceptual CIP for the included facility categories, assessing what additional capacity and conceptual projects are required to provide needed infrastructure for new development through 2030;
- **Phase Two:** Evaluate existing and potential funding sources, and outline options available as financing mechanisms, including a development fee proposal; and
- **Phase Three:** Perform a fiscal (operational) analysis for use in evaluating the ongoing operating and maintenance impact of a new development on the County's general fund.

The adopted CIP includes a summary of proposed service levels for the included facilities and a conceptual list of planned projects upon which the CIP was based.

Public Facilities Mitigation Program

The changing fiscal landscape in California during the past 30 years has steadily undercut the financial capacity of local governments to fund infrastructure. Three dominant trends stand out:

- The passage of a number of tax limitation measures, starting with Proposition 13 in 1978 and continuing through the passage of Proposition 218 in 1996;
- Declining popular support for bond measures to finance infrastructure for the next generation of residents and businesses; and
- Steep reductions in federal and state assistance.

Faced with these trends, 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. As described above, Kern County adopted a CIP in 2007 that identifies the best current understanding of the public facilities that will be needed to accommodate new development anticipated through 2030. The CIP further identifies appropriate existing facility demand standards to be used as a basis for estimating future facility needs and level of service. The basic purpose of the CIP is to identify the facilities and infrastructure needed to serve the population through 2030.

Continued growth in the County, as well as the impacts resulting from that growth, have increased the demands on countywide public services, making it difficult to implement and fund many of the facilities identified within the CIP while maintaining existing public service demand standards.

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

- Sheriff patrol and investigation facilities; and
- Fire facilities.

4.14.4 Impacts and Mitigation Measures

Methodology

The methodology used to evaluate potential public services impacts includes the following: (1) evaluation of existing fire and law enforcement services, personnel for the fire and law enforcement stations, and schools, park, and library facilities serving the project site; (2) determination of whether the existing fire and law enforcement services and personnel and schools, park, and library facilities are capable of servicing the proposed project, in addition to the existing population and building stock; and (3) determining whether the proposed project’s contribution to the future service population would cause fire or sheriff station(s) to operate beyond service capacity or cause the need for additional schools, park, and library facilities. The determination of the significance of the proposed project on fire protection and emergency medical and law enforcement protection services considers the level of services required by the proposed project and the ability of KCFD and Kern County Sheriff’s Office to provide this level of service and maintain the regular level of service provided throughout the County, which in turn could require the construction of new or expansion of existing facilities. The methodology for this analysis included a review of published information pertaining to KCFD and Kern County Sheriff’s Office and existing schools, park, and library facilities. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to

the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the *CEQA Guidelines*, to determine if a project would have a significant adverse effect on public services:

A project would have a significant impact on 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 would cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
 - i. Fire Protection
 - ii. Police Protection
 - iii. Schools
 - iv. Parks
 - v. Other Public Facilities

Project Impacts

Impact 4.14-1: The project would result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services or law enforcement protection services.

Fire Protection

Construction

Construction of the proposed project would require 8 to 35 daily construction workers for the non-hazardous waste landfill construction and 8 to 65 daily workers for the hazardous tank treatment building construction (for a maximum of 100 construction workers on-site at any given time). The presence of construction workers at the project site would be temporary during the approximately seven-month construction timeframe for the first stage of the WMU 36 non-hazardous waste landfill construction and approximately one-year construction timeframe for the hazardous tank treatment building construction. Future construction of the second stage of WMU 36, and the subsequent construction of WMUs 37 and 38 would require similar construction periods and workers. The proposed project would include emergency access and other safety features and plans for fire protection. As determined by the County, and as shown in **Figure 4.18-1, Fire Hazard Severity Zones – Local and State Responsibility Areas**, in Section 4.18, *Wildfires*, of this EIR, the project site is not within an area of high or very high fire hazard (CAL FIRE 2007a). The project site is not located within an SRA (CAL FIRE 2007b).

Fire protection requirements are based on the number of residents and workers in the KCFD primary service areas. Service demand is primarily tied to population, not building size, because emergency medical calls typically make up the majority of responses provided by the fire department. As the number of residents and workers increases, so does the number of emergency medical calls. There are no residential uses proposed as a part of the project. Therefore, no residents would occupy the project site and an increase in service demands as a result of an increase in residential uses would not occur.

Service demands as a result of personnel onsite could occur during construction of the proposed project. Typically, service demands per employee are less than service demands per resident. Nevertheless, the addition of construction personnel on the project site could result in an increase in demand for fire protection services. While this would be an increase above existing levels, the presence of construction workers on the site would be temporary, as the construction period for the proposed project would last approximately seven months for each stage of the non-hazardous waste landfill construction and approximately one year for the hazardous tank treatment building construction.

While construction of the proposed project would increase the number of people on the project site, the increase would be temporary and would therefore not substantially increase the service demand for fire protection services in Kern County. In addition, the project site is not located within an area of high or very high fire hazard, as determined by the County (KCFD 2009) or CAL FIRE (CAL FIRE 2007a, 2007b). However, temporary construction would potentially increase the potential fire hazard, due to heavy equipment

crossing the proposed expansion area containing sparse, low-lying vegetation. Therefore, the fire safety plan contained in the Facility's ERP should be updated, as necessary, to include notification procedures and emergency fire precautions consistent with the 2022 California Fire Code and Kern County Fire Code. Given the temporary nature of the project's construction phase and implementation of MM 4.14-1, impacts to fire protection services and facilities during project construction would be less than significant.

Operation

Once constructed, in addition to the existing 25 employees present on-site during existing operations, the new Class II non-hazardous landfills will require two additional full-time personnel for site operations, maintenance, environmental controls, records, emergency, and health and safety. Operation activities and equipment would be similar to on-going activities. With the implementation of the Facility's fire safety plan, operation of the Facility would not require the expansion of fire facilities, and impacts would be less than significant.

Law Enforcement Protection

Construction

As described above in Section 4.14.2, *Environmental Setting*, the Kern County Sheriff's Office provides primary law enforcement protection services for the project site and surrounding areas. The Buttonwillow Substation, located approximately 8 miles east of the project site, would provide primary law enforcement services to the project site. Similar to fire protection services, the need for law enforcement protection services would increase during construction of the proposed project.

The project site is located in a relatively remote location surrounded by undeveloped and agricultural land and is unlikely to attract attention that would make project facilities susceptible to crime. In addition, the site is already developed as an existing landfill Facility. Therefore, a large increase for Kern County Sheriff's Office services is not expected. However, construction activities may temporarily increase traffic volumes along SR-58, SR-33, and nearby roadways during the seven-month construction period (for each stage of the non-hazardous waste landfill construction) and the one-year construction period (for the hazardous tank treatment building construction). The added traffic associated with workers commuting to the project site, haul routes, deliveries, and other project-related traffic would be temporary and, therefore, would not have a significant adverse effect on the Kern County Sheriff's Office protective service provision or CHP's ability to patrol the highways.

While construction of the proposed project would increase the number of people on the project site, the increase would be temporary and negligible and, thus, would not substantially increase the service demand for law enforcement protection services in Kern County. Therefore, new or physically altered Kern County Sheriff's Office or CHP facilities would not be required to accommodate the limited increase in needs from the project during construction and impacts to law enforcement services are less than significant.

Operation

Project operation could attract vandals or present other security risks. As described above, the project site is located in a relatively remote location in a rural community, and is thus unlikely to attract attention that would make project facilities susceptible to crime. In addition, the site is already developed as an existing

landfill Facility, which includes various security features, such as physical barriers and gates, normal and emergency lighting, two-way radios, cell phones and the internal phone system, and security equipment and procedures for entry into the Facility (see Section 4.14.2, above). As discussed above, in addition to the existing 25 employees present on-site during existing operations, the new Class II non-hazardous landfills will require two additional full-time personnel for site operations, maintenance, environmental controls, records, emergency, and health and safety. Similar to existing conditions, existing security fencing, normal and emergency lighting, internal phone systems, and controlled access gates would also be implemented for the proposed project and would minimize the need for sheriff surveillance and response during project operation. Furthermore, similar to existing conditions, all Facility personnel, contractors, agency personnel, and visitors would be logged in and out of the Facility at the main office located at the proposed facilities during normal business hours. Therefore, new or physically altered Kern County Sheriff's Office facilities would not be required to accommodate the proposed project. Impacts would be less than significant.

Schools/Parks/Other Facilities

Construction

During construction, construction workers would be temporarily present on the project site. As discussed above, construction of the proposed project would require 8 to 35 daily construction workers for the non-hazardous waste landfill construction and 8 to 65 daily workers for the hazardous tank treatment building construction, for a maximum of 100 daily construction workers. These construction workers would likely come from an existing local and/or regional construction labor force and would not likely relocate their households as a consequence of working on the project. Therefore, the short-term increased employment of construction workers on the project site would not result in a notable, if any, increase in the residential population of the area surrounding the project site. Accordingly, there would not be a corresponding demand or use of the local schools, parks, or public facilities. Therefore, project construction workers would not increase demand for local schools, parks, or public facilities such that substantial physical deterioration of such facilities would occur, nor would project construction require the construction or expansion of recreational facilities which might have an adverse effect on the environment, nor result in substantial adverse physical impacts associated with the construction of new or physically altered facilities in order to maintain acceptable service ratios. Impacts would be less than significant.

Operation

As discussed above, during operations, in addition to the existing 25 employees present on-site during existing operations, the new Class II non-hazardous landfills will require two additional full-time personnel for site operations, maintenance, environmental controls, records, emergency, and health and safety. This increase in staff would be minimal and would likely come from an existing local and/or regional labor force and would not likely relocate their households as a consequence of working on the project. Therefore, the increase of onsite staff at the project site would not result in a notable increase in the residential population of the area surrounding the project site. Accordingly, there would not be a corresponding demand or use of the local schools, parks, or public facilities, and impacts would be less than significant.

Mitigation Measures

MM 4.14-1: Prior to the issuance of grading or building permits, the project proponent/operator shall update, as needed, and implement the Facility's ERP, including the Fire Safety Plan for use during construction, operation, and closure of the Facility.

The project proponent/operator 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. The Fire Safety Plan shall contain notification procedures and emergency fire precautions including, but not limited to the following:

- a. All internal combustion engines, both stationary and mobile, 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 will maintain their factory-installed (type) muffler in good condition.
- c. Fire rules shall be posted on the project bulletin board at the contractor's field office and 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.
- f. The project proponent/operator shall make an effort to restrict the use of chainsaws, chippers, vegetation masticators, grinders, drill rigs, tractors, torches, and explosives to periods outside of the official fire season. When the above tools are used, water tanks equipped with hoses, fire rakes, and axes shall be easily accessible to personnel.

Level of Significance After Mitigation

With the implementation of Mitigation Measures MM 4.14-1, 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 substantially increase other environmental impacts. Cumulative impacts for a project are considered significant if the incremental effects of the individual projects are considerable when viewed in connection with the effects of past projects, and the effects of other projects located in the vicinity of the project site. The cumulative study area is based on the service area for each of the fire, sheriff and other governmental offices/facilities serving the project site. As discussed above, direct impacts to fire and police protection services related to the proposed project would be less than significant with mitigation.

Schools and other public facilities would not be directly impacted by the project, as discussed above. However, cumulatively, development will require expanded facilities, including fire and police protection. This need has been acknowledged in the County's Public Facilities Mitigation Program. The proposed project would cumulatively contribute to the need for expanded facilities. With payment of the required mitigation fee as assessed by the Kern County Planning and Natural Resources Department, the project's incremental need for future facilities would be mitigated. Mitigation Measure 4.14-2 would confirm the project's commitment to pay its proportionate share for future public facilities to meet the needs of cumulative development in the County.

Mitigation Measures

MM 4.14-2: Prior to the issuance of grading or building permits, the project proponent shall coordinate with Kern County to determine the need for payment of land development services fees, in accordance with the Kern County Land Development Services Fee Schedule, for impacts to Countywide public protection, sheriff's patrol and investigative services, and fire services. If payment of land development services fees is determined to be required for the project, the project proponent shall submit evidence of payment to the Kern County Planning and Natural Resources Department prior to issuance of grading or building permits.

Level of Significance after Mitigation

With the implementation of Mitigation Measure MM 4.14-2, cumulative impacts would be less than significant.

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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 and describes the environmental and regulatory settings. Information in this section is primarily based on the Transportation Impact Study for the Clean Harbors Buttonwillow WMU 36, 37, & 38 Non-Hazardous Waste Disposal Landfill Project (prepared by Gibson Transportation Consulting, Inc. in 2021), included in Appendix J of the EIR.

The California Department of Transportation District 6 provided a scoping comment letter noting a traffic impact study should be prepared for the proposed project. The Association of Irrigated Residents provided a scoping comment letter noting that all traffic impacts must be analyzed. All scoping comments are provided in Appendix A.

4.15.2 Environmental Setting

Regional Setting

Major Highways and Roadways

The following Highways and Roadways provide local and regional circulation to the project site:

Interstate 5 (I-5) is a major north-south interstate freeway that travels the length of California, connecting the metropolitan regions of Southern and Northern California and is located approximately eight miles northeast of the project site. It is classified as an interstate in the California Road System Map (CRS) and a freeway/expressway in the County General Plan. It is a divided highway providing two travel lanes in each direction.

Lokern Road is an east-west roadway providing direct access to the project site. It is classified as a major collector in the CRS and a collector in the County General Plan. It provides one travel lane in each direction.

State Route (SR) 33 is a north-south state highway approximately three miles west of the project site. It is classified as a minor arterial in the CRS and an arterial/major highway in the County General Plan. It provides one travel lane in each direction.

SR 58 is an east-west state highway meeting Lokern Road approximately four miles east of the project site. It provides a connection to I-5 approximately eight miles further to the east. It is classified as a minor arterial in the CRS and an arterial/major highway in the County General Plan. It provides one travel lane in each direction.

Corn Camp Road is a north-south roadway connecting 7th Standard Road to SR 58 approximately five miles east of the project site. It is classified as a minor collector in the CRS and a collector/secondary highway in the County General Plan. It provides one travel lane in each direction.

7th Standard Road is an east-west roadway approximately three miles north of the project site. It provides a connection to I-5 to the east. It is classified as a major collector in the CRS and a collector / secondary highway in the County General Plan. It provides one travel lane in each direction.

According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System, there are no designated State Scenic Highways within Kern County (see Section 4.15.3, *Regulatory Setting*, for more information on the State Scenic Highway Mapping System).

Alternative Transit Facilities

Non-Motorized Transportation

Bicycling is considered an effective alternative mode of transportation that can help to improve air quality, reduce the number of vehicles traveling along existing roads and highways, and reduce energy consumption. There are 67 miles of existing bicycle facilities in the unincorporated portions of Kern County. There are no dedicated bicycle facilities in the immediate vicinity of the project sites or along the surrounding roadways.

Public Transit

Public transportation in Kern County is provided by Kern Regional Transit, which offers 16 fixed routes throughout the County and a dial-a-ride public transportation service for residents in the communities of Frazier Park, Lamont, Mojave, and Rosamond; the City of Tehachapi; and the Kern River Valley (Kern Transit 2022). No public transit routes pass or stop near the project site.

Airport Facilities

The project site is not within the sphere of influence (SOI) of any airport identified by the Kern County ALUCP. The closest public airport identified by the Kern County Airport Land Use Compatibility Plan (ALUCP) is the Elk Hills-Buttonwillow Airport located approximately eight miles from the proposed project site.

Project Site

Existing access routes

Primary access to the Facility is via Lokern Road accessed from the east by SR 58 or from the west from SR 33 (see **Figure 3-8, Existing Haul Truck Routes**), via Lokern Road for waste delivery. Two types of waste trucks travel to and from the project site: hazardous and non-hazardous waste. Hazardous waste trucks, when approaching from the east, are prohibited from traveling on SR 58 through Buttonwillow from I-5. Instead, hazardous waste trucks must use 7th Standard Road (three miles north of SR 58), then follow the marked signs west to Corn Camp Road and south to SR 58 as shown on Figure 3-8. Non-hazardous waste truck routes are not restricted, but those trucks are encouraged to use the designated hazardous waste route.

Site Access

Existing access routes provide access to the project site via Lokern Road. The project does not include the construction of new access routes.

Existing Truck Trips

Peak hour truck trip generation for the project site was estimated using daily visitor logs provided by the Applicant for four high-volume weeks in 2018 (operations have not changed substantively since this data was collected and thus it remains valid for use). The visitor logs showed all of the arrival and departure times for every vehicle traveling to or from the project site. The truck trips were compiled and sorted by hour for all four weeks. The daily truck totals are summarized in Table 4.15-1, Existing Daily Truck Totals, below. As shown, the number of daily trucks to and from the project site ranged from 29 to 178 (Appendix J).

TABLE 4.15-1: EXISTING DAILY TRUCK TOTALS

Week	Monday	Tuesday	Wednesday	Thursday	Friday
Week of May 14, 2018	97	108	139	178	N/A
Week of May 21, 2018	146	101	125	126	97
Week of June 4, 2018	134	140	139	130	156
Week of June 11, 2018	88	81	110	129	128

Table 4.15-2, Truck Arrival and Departure Patterns, summarizes the inbound and outbound distribution of truck trips by hour throughout the day. As shown, truck activity peaked in the hour between 1:00 PM and 2:00 PM, well outside of the morning (7:00 AM to 9:00 AM) and evening (4:00 PM to 6:00 PM) peak periods (Appendix J).

TABLE 4.15-2: EXISTING TRUCK ARRIVAL AND DEPARTURE PATTERNS

Hour	In	Out	Total	Notes
Average Daily Trips	124	124	248	
6:00 AM to 7:00 AM	2.9%	0.1%	1.5%	
7:00 AM to 8:00 AM	2.3%	0.2%	1.2%	
8:00 AM to 9:00 AM	7.2%	0.2%	3.7%	Morning Peak Hour
9:00 AM to 10:00 AM	8.4%	6.3%	7.4%	
10:00 AM to 11:00 AM	11.0%	10.7%	10.8%	
11:00 AM to 12:00 PM	10.7%	10.5%	10.6%	
12:00 PM to 1:00 PM	16.2%	11.7%	14.0%	
1:00 PM to 2:00 PM	16.2%	15.3%	15.8%	Mid-day (Overall) Peak Hour
2:00 PM to 3:00 PM	13.4%	17.2%	15.3%	
3:00 PM to 4:00 PM	8.0%	14.3%	11.1%	

TABLE 4.15-2: EXISTING TRUCK ARRIVAL AND DEPARTURE PATTERNS

Hour	In	Out	Total	Notes
4:00 PM to 5:00 PM	3.7%	8.9%	6.3%	Evening Peak Hour
5:00 PM to 6:00 PM	0.1%	3.8%	2.0%	
6:00 PM to 7:00 PM	0.0%	0.5%	0.2%	
After 7:00 PM	0.0%	0.3%	0.1%	

4.15.3 Regulatory Setting

Federal

Federal Highway Administration

The FHWA supports State and local governments in the design, construction, and maintenance of the Nation's highway system. The strategic priorities of the administration are national leadership in transportation policy and innovation, effective delivery of the Federal highway programs, improved safety and performance of our Nation's highway systems, and enhancement of administration's corporate capacity to achieve its mission. The administration has developed a vehicle classification scheme that is separated into categories depending on whether the vehicle carries passengers or commodities and on the number of axles for each vehicle. There are 13 distinct vehicle classifications.

State

California Department of Transportation

Caltrans has jurisdiction over state highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. The Central Valley and western portions of Kern County (i.e., including the project site and surrounding area) are under the jurisdiction of Caltrans District 6. The Caltrans regulations below apply to potential transportation and traffic impacts of the project:

- **California Vehicle Code (CVC), Division 15, Chapters 1–5 (Size, Weight, and Load):** Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.
- **California Street and Highway Code Sections 660–711, 670–695:** Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of State and County highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.
- **Project Development Procedures Manual, Chapter 27. Access Control Modification.** Requires Caltrans approval of proposed connections to a public road through submittal of a proposal to Caltrans (Caltrans 2021a).

Senate Bill 743

SB 743, approved in 2013, endeavors to change the way transportation impacts will be determined according to the California Environmental Quality Act (CEQA). The bill, which was codified in Public Resources Code section 21099, aims to promote the reduction of greenhouse gas (GHG) emissions, the development of multimodal transportation networks, and a diversity of land uses. The Governor's Office of Planning and Research (OPR) has recommended the use of Vehicle Miles Travelled (VMT) as the replacement for automobile delay-based Level of Service (LOS) for the purposes of determining a significant transportation impact under CEQA. As of December 2018, the Natural Resources Agency finalized updates to CEQA Guidelines to incorporate SB 743 (i.e., VMT). To assist in the implementation of VMT as the primary measure of a transportation impact under CEQA, the OPR published an updated Technical Advisory on Evaluating Transportation Impacts in CEQA in December 2018. Statewide application of the new guidelines went into effect on July 1, 2020.

Technical Advisory on Evaluating Transportation Impacts in CEQA

The Governor's Office of Planning and Research (OPR) released the Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) in December 2018. The Technical Advisory aids in the transition from LOS to VMT methodology for transportation impact analysis under CEQA. The advisory contains technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. Section C.1 of the Technical Advisory states that VMT refers to on-road passenger vehicles, not heavy-duty trucks.

Local

Kern County General Plan

The policies, goals, and implementation measures in the Kern County General Plan Circulation Element for transportation that are applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development, such as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference. The design LOS for Kern County is LOS C. The minimum LOS for conformance with the Kern County General Plan is LOS D.

Chapter 2. Circulation Element

2.1 Introduction

Goals

Goal 4: Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.

Goal 5: Maintain a minimum Level of Service (LOS) D for all roads throughout the County unless the roads are part of an adopted Community Plan or Specific Plan which utilizes Smart Growth policies that encourage efficient multi-modal movements.

2.3 Highways

Goals

Goal 5: Maintain a minimum LOS D.

Policies

Policy 1: Development of roads within the County shall be in accordance with the Circulation Diagram Map. The charted roads are usually on section and midsection lines because the road centerline can be determined by an existing survey.

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 Measures

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. The Planning Department can help developers and property owners 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 Elements 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

Measure A: The County should relate traffic levels to road capacity and development levels. To accomplish this, the Roads Department and Planning Department should set up a monitoring program. The program would identify traffic v/c ratios and resulting level of service. The geographic base of the program would be traffic zones set up by Kern Council of Governments (COG).

Measure C: Project development shall comply with the requirements of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.

2.3.5 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 and, 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.

Implementation Measures

Measure A: Caltrans should further detail the need for improvement of pavement conditions on the State Highway System. This would encourage Caltrans implementation of the above Policies.

2.5.4 Transportation of Hazardous Materials

Transportation-related accidents and spills of hazardous materials pose a serious threat to the traveling public and nearby sensitive land uses. Transportation of hazardous materials poses a short-term threat to public health.

Goals

Goal 1: Reduce risk to public health from transportation of hazardous materials.

Policies

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

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

Implementation Measures

Measure A: Roads and highways utilized for commercial shipping of hazardous waste destined for disposal will be designated as such pursuant to Vehicle Code Sections 31303 et seq. Permit applications shall identify commercial shipping routes they propose to utilize for particular waste streams.

Figure 11, Adopted Commercial Hazardous Materials Shipping Routes, within the Circulation Element of the General Plan shows the approved hazardous materials routes within the County.

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.

Kern Council of Governments

Kern COG is a Federally designated Metropolitan Planning Organization (MPO) and a State-designated Regional Transportation Planning Agency (RTPA). These designations formally establish Kern COG's role in transportation planning. Kern COG's Board of Directors comprises elected representatives from the 11 incorporated Cities and two members of the County Board of Supervisors. A Memorandum of Understanding between Kern COG and Caltrans District 6 also provides for a Transportation Planning Policy Committee, which is the existing Board plus ex officio members from Caltrans, Kern County's military bases, and Golden Empire Transit District. The Transportation Technical Advisory Committee (TTAC), composed of technical staff from member agencies, other interested agencies, public members, Caltrans, and the San Joaquin Valley and Kern County Air Districts, provides support to the Board of Directors. In addition, the Social Services Transportation Advisory Committee also provides support to the Board of Directors by focusing on the needs of transit-dependent and transit disadvantaged persons, including the elderly, disabled, and persons of limited means.

Kern Council of Governments Congestion Management Program

All urbanized areas with a population larger than 200,000 residents are required to have a congestion management system, program, or process. The Kern COG refers to its congestion management activities as the CMP. Kern COG was designated as the Congestion Management Agency.

The CMP provides a systematic process for managing congestion and information regarding (1) transportation system performance, and (2) alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet State and local needs. The purpose of the CMP is to ensure that a balanced transportation system is developed that relates population growth, traffic growth, and land use decisions to transportation system LOS performance standards and air quality improvement. The program attempts to link land use, air quality, transportation, and advanced transportation technologies as integral and complementary parts of this region's plans and programs.

The purpose of defining the CMP network is to establish a system of roadways that will be monitored in relation to established LOS standards. At a minimum, all State highways and principal arterials must be designated as part of the Congestion Management System of Highways and Roadways. Kern County has 18 designated state highways.

Kern County Regional Transportation Plan

The 2022 Regional Transportation Plan (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 federally required continuing, comprehensive, and cooperative planning process, and provides for effective coordination between local, regional, state and federal 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 (ARB) set targets for Kern's 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. The Kern region has outperformed the 2020 state GHG target and this plan shows the County is on track to achieve the 2035 target. The easy reductions have been achieved and the region needs to fully implement the remaining strategies identified in the RTP to achieve the targeted reductions.

The intent of the SCS is to achieve the state's emissions reduction targets for automobiles and light trucks. The SCS will also provide opportunities for a stronger economy, healthier environment, and safer quality of life for community members in Kern County. This RTP/SCS seeks to: improve economic vitality, improve air quality, improve the health of communities, improve transportation and public safety, promote the conservation of natural resources and undeveloped land, increase regional access to community services, increase regional and local energy independence and increase opportunities to help shape the community's future.

The RTP/SCS financial plan identifies how much money is available to support the region's transportation investments. The plan includes a core revenue forecast of existing local state and federal sources along with funding sources that may be considered reasonably available over the time horizon of the RTP/SCS.

As the Congestion Management Agency, Kern COG has responsibility to ensure that all cities and the county are following the Congestion Management Program (CMP). Kern COG completes a coordinated and comprehensive review of current traffic data during each RTP update. Through the Kern Regional Traffic Count Program, the cities, county, and Caltrans undertake annual traffic counts on their roads. Use of current peak-hour traffic counts to monitor congestion ensures that the review is based on observed traffic conditions and includes an innovative multi-model level of service analysis policy. The SCS includes a Rural Urban Connectivity Strategy analysis designed to ensure that the economic development of rural areas for agriculture, energy, tourism, military, and other activities are not left out of efforts to provide for a more efficient transportation system.

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 site is not located within a designated Airport Land Use Compatibility zone.

4.15.4 Impacts and Mitigation Measures

Methodology

The transportation and traffic analysis presented in this section is based largely on the Traffic Impact Study for the Clean Harbors Buttonwillow WMU 36, 37, & 38 Non-Hazardous Waste Disposal Landfill Project, included in Appendix J of the EIR. The Traffic Impact Study presents the transportation impact analysis for the project and the methodology and base assumptions used in the analysis were established in consultation with County staff through a Scoping Agreement dated April 4, 2019. Further, the Scoping Agreement was reviewed and approved by the California Department of Transportation.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to

the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

VMT Analysis

The requirements for VMT analysis for development projects are detailed in *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR 2018) (Technical Advisory). The Technical Advisory states on page 4 that VMT impacts should be assessed based on VMT generated by passenger vehicles, including cars and light trucks. It specifically excludes heavy-duty trucks such as waste-hauling trucks from contributing to a significance finding under CEQA. Further, it states on page 12 that development projects that would generate or attract fewer than 110 net new passenger vehicle trips per day may be assumed to cause a less-than-significant transportation impact.

Project Trip Generation

The Facility's CUP currently allows a daily combined tonnage limit for hazardous and non-hazardous waste of 4,050 tons per day, with no limit on truck trips per 24-hour period. The mix of waste type, hazardous versus non-hazardous, varies daily, as do the number of trucks. The project would allow the Facility to accept an additional 4,050 tons of non-hazardous waste per day, over and above the existing activity limits (the Applicant anticipates an average increase of approximately 1,000 tons per day, but this analysis is based on the maximum allowance of 4,050 tons per day). Therefore, the daily limit on total waste would be 8,100 tons per day, with a limit of 4,050 tons per day for hazardous waste.

Based on information provided by the Applicant, waste trucks typically carry between 12 and 23 tons of waste. Therefore, on days when the maximum 4,050 tons of waste are delivered to the project site, this would result in between approximately 176 and 338 new trucks per day traveling to and from the project site. (On average days with 1,000 tons of waste delivered, the number of new trucks would be substantially fewer, between 43 and 88 trucks per day.) Based on the peak hour distribution factors from the Traffic Impact Study, the maximum 338 new daily trucks that could travel to and from the project site with the implementation of the project would generate up to 25 morning peak hour trips, 43 evening peak hour trips,

and 107 trips during the mid-day peak hour between 1:00 PM and 2:00 PM (the remainder of the truck trips would occur outside of those three peak hours). Other types of trips to and from the Project Site, such as those generated by employees and service vehicles, are a small fraction of the waste truck trip generation and would be minimally increased by the project.

Thresholds of Significance

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

- a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;
- b. Conflict or be inconsistent with State CEQA *Guidelines* Section 15064.3(b);
- c. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- d. Result in inadequate emergency access.

Level of Service Analysis

Caltrans controls all of the study locations and relies on LOS to determine deficiencies. Caltrans strives to maintain operations at the LOS C/D threshold on State-operated facilities. If an existing State highway Facility is operating at LOS D, E, or F, the existing measure of effectiveness should be maintained. Significant impacts to Caltrans facilities are identified if operations degrade from LOS C or better to LOS D, E, or F, or proposed project traffic is added to an intersection or segment operating at LOS D, E, or F. The Kern County Circulation Element identifies LOS D as the minimum acceptable traffic level for Kern County-maintained roads.

Pursuant to SB 743, the focus of transportation analyses changed from level of service (LOS) or vehicle delay to VMT. The related updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. This new methodology was required to be used statewide beginning July 1, 2020. At the time of release of this Draft EIR, the County as the lead agency under CEQA, has not yet formally adopted its updated transportation significance thresholds or its updated transportation impact analysis procedures. Therefore, guidance from the Technical Advisory was relied on in this EIR (OPR 2018). Additionally, the Traffic Impact Study prepared for the project includes a LOS consistency analysis for existing year (2019), project opening year, and long-range future (2042) conditions, with and without the addition of project traffic. This analysis was conducted for four facilities, including the intersections of Lokern Road with SR 33 and SR 58 and the segments of Lokern Road east and west of the project Site. This analysis is included in Appendix J for informational purposes only and no further discussion regarding LOS is included in this EIR per the CEQA guidelines required under SB 743.

Project Impacts and Mitigation Measures

Impact 4.15-1: The project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Trip Generation

Trip generation for the project was estimated based on the number of additional trucks that would be required to accommodate the proposed CUP modifications for the Facility. As described above, the project would result in a maximum of 338 new trucks (676 daily trips, including one inbound and one outbound trip for each of the 338 trucks) on days when the maximum of 4,050 tons of waste would be delivered. This includes up to 175 peak hour trips (25 morning peak hour trips, 43 evening peak hour trips, and 107 trips during the mid-day peak hour between 1:00 PM and 2:00 PM) as shown in **Table 4.15-3, Project Peak Hour Trip Generation** (the remainder of the daily truck trips would occur outside of those three peak times).

TABLE 4.15-3: PROJECT PEAK HOUR TRIP GENERATION¹

Maximum New Truck Trips	In	Out	Total
Daily	338	338	676
Morning Peak Hour	24	1	25
Evening Peak Hour	13	30	43
Mid-day Peak Hour	55	52	107

¹ Maximum potential new trips based on maximum of 4,050 daily tons of waste.

Trip Distribution and Assignment

The likely approach routes based on the direction of origin were determined using an applicant-provided report that summarized the points of origin of all non-hazardous waste from year 2018 by weight and indicated that the geographic origin of hazardous waste follows a similar pattern. **Figure 4.15-1, Regional Truck Trip Distribution**, summarizes the regional distribution pattern applicable to both nonhazardous and hazardous waste.

The trip generation estimates from Table 4.15-3 were assigned to the roadway network according to the distribution pattern from Figure 4.15-1. During the morning and evening peak hours, the project would generate fewer than 50 new truck trips on any of the four analyzed facilities (i.e., the two intersections and two road segments on Lokern Road) and thus is below the County's minimum trip threshold for requiring analysis of these facilities. However, given the mid-day peak hour project traffic volumes, as well as the desire to prepare a conservative analysis, all four facilities were analyzed under all three peak hours.

All four facilities were found to operate at LOS C or better in all scenarios. This is an acceptable operating condition for both the County and Caltrans. It is not anticipated that implementation of the project would substantially interfere with existing roadway operations or circulation patterns within the project area as provided by the information above. It is anticipated that implementation of the project would increase truck trips by a maximum of approximately 338 new trucks per day. None of the proposed project activities would result in a conflict with an applicable plan, ordinance or policy addressing the circulation system. The

project requires a modification to the existing CUP, which would contain any conditions of approval required for development of the project in compliance with the General Plan. The project does not propose any features that are inconsistent with applicable policies of the County's General Plan Circulation Element.

There are no pedestrian or public transit facilities in the vicinity of the project site. No elements of the proposed project that would conflict with alternative transportation programs have been identified; therefore, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, or pedestrian facilities. Impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.15-2: The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3.

The project is estimated to generate a maximum of 338 new trucks (676 trips) on a daily basis, including up to 25 morning peak hour trips, 43 evening peak hour trips, and 107 trips during the mid-day peak hour between 1:00 PM and 2:00 PM.

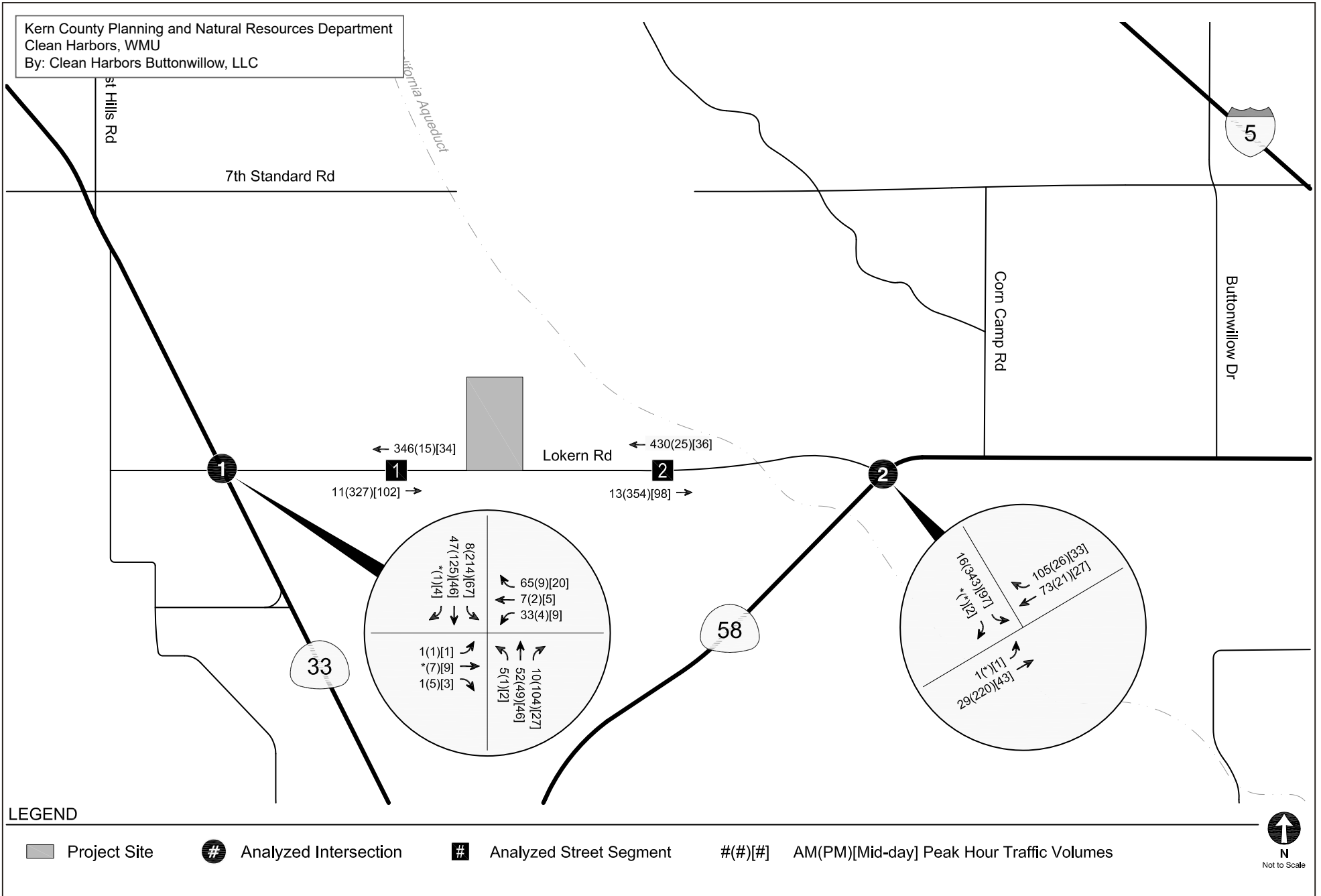
Section 15064.3 of the CEQA Guidelines states that VMT shall normally be used as the standard to evaluate the transportation impacts of a project. The Technical Advisory (OPR 2018) provides the following guidance for evaluating projects that include heavy truck traffic:

Vehicle Types. Proposed Section 15064.3, subdivision (a), states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." Here, the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks.

The Technical Advisory further states:

Screening Threshold for Small Projects. Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact.

The statements from the advisory indicate that heavy truck trips, such as those trips generated by the project, are not subject to VMT analysis, thresholds, or reduction requirements as part of the CEQA review process. The project would generate minimal new passenger vehicle and light truck trips resulting from an increase in employees or service vehicle trips and would fall under the 110-trip threshold recommended in the Technical Advisory. Therefore, the project trips, by definition, do not create a significant impact with regards to VMT. Impacts would be less than significant.



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Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.15-3: The project could substantially increase hazards due to a design feature.

The proposed project would generate new truck trips associated with the delivery of both non-hazardous and hazardous waste. Currently, hazardous waste trucks, when approaching from the east, are prohibited from traveling on SR 58 through Buttonwillow from I-5. Instead, hazardous waste trucks must use 7th Standard Road (three miles north of SR 58), then follow the marked signs west to Corn Camp Road and south to SR 58. Non-hazardous waste truck routes are not restricted, but those trucks are encouraged to use the designated hazardous waste route. The additional trucks generated by the project would utilize the same routes that are currently used, and the trucks hauling hazardous waste would be required to comply with the hazardous waste transportation requirements listed in the Kern County General Plan and the Facility's Hazardous Waste Materials Business Plan.

A new main entrance to the Facility would be constructed near the west end of the project site to replace the existing entrance near the east end. To facilitate safe ingress/egress from the project site to Lokern Road, Mitigation Measure 4.15-1 has been identified to require acquisition of an encroachment permit, which would require construction of an asphalt-concrete paved private road approach along the Lokern Road frontage.

If oversized vehicles are used during construction or operation activities, a public safety hazard could be created by limiting motorist views on roadways and by the obstructing space, which is considered a potentially significant impact. Therefore, MM 4.15-2 would require that all oversize vehicles used on public roadways during construction and/or operations obtain permits from Caltrans. During construction, the project proponent would be required to obtain approval of a Construction Traffic Control Plan, which would identify anticipated construction delivery times and vehicle travel routes in advance to minimize construction traffic during AM and PM peak hours. This would ensure that construction-related oversize vehicle loads are in compliance with applicable California Vehicle Code sections and California Street and Highway Codes applicable to licensing, size, weight, load, and roadway encroachment of construction vehicles.

With implementation of MM 4.15-1 and MM 4.15-2, the project would not contribute to an increase in hazards due to a design feature; therefore, impacts would be less than significant.

Mitigation Measures

MM 4.15-1 Prior to construction of the new Facility entrance, the project proponent shall obtain an encroachment permit from the Kern County Public Works Department requiring construction of an asphalt-concrete paved private road approach along Lokern Road. The access design shall conform to County standards. The location of access will be approved by the Kern County Public Works Department prior to construction.

MM 4.15-2 Prior to the issuance of construction or building permits, the project proponent/operator shall:

- a. Prepare and submit a Construction Traffic Control Plan to the Kern County Public Works Department – Development Review and the California Department of Transportation District 6 offices, as appropriate, for approval. The Construction Traffic Control Plan must be prepared in accordance with both the California Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and must address, at a minimum, the following issues:
 1. Timing of deliveries of heavy equipment and building materials;
 2. Directing construction traffic with a flag person;
 3. Placing temporary signing, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic;
 4. Ensuring access for emergency vehicles to the project site;
 5. Temporarily closing travel lanes or delaying traffic during materials delivery, transmission line stringing activities, or any other utility connections;
 6. Maintaining access to the adjacent property; and
 7. Specifying both construction-related vehicle travel and oversize load haul routes, minimizing construction traffic during the AM and PM peak hours.
- b. Obtain all necessary encroachment permits for the use of oversized/overweight vehicles that will utilize Kern County-maintained roads, which may require California Highway Patrol or a pilot car escort. Copies of the approved traffic plan and issued permits shall be submitted to the California Department of Transportation, Kern County Planning and Natural Resources Department, and Kern County Public Works Department – Development Review.
- c. Enter into a secured agreement with Kern County to ensure that any Kern County roads that are demonstrably damaged by project-related activities are promptly repaired and, if necessary, paved, slurry-sealed, or reconstructed as per requirements of the State and/or Kern County.
- d. Submit documentation that identifies the roads to be used during construction. The project proponent/operator shall be responsible for repairing any damage to Kern County- and non-Kern County-maintained roads that demonstrably result from construction activities. The project proponent/operator shall submit a preconstruction video log and inspection report regarding roadway conditions for roads used during construction to the Kern County Planning and Natural Resources Department and Kern County Public Works Department – Development Review.

- e. Within 30 days of completion of construction, the project proponent/operator shall submit a post-construction video log and inspection report to Kern County. This information shall be submitted in an electronic format suitable to the County. Kern County, in consultation with the project proponent/operator's engineer, shall determine project responsibility for the damage and the extent of remediation required, if any.

Level of Significance after Mitigation

With implementation of MM 4.15-1 and MM 4.15-2, impacts would be less than significant.

Impact 4.15-4: The project would not result in inadequate emergency access.

The project site is located in a rural area with the primary access roads allowing adequate egress/ingress to the site in the event of an emergency. The new entrance would be constructed to meet all County requirements. Therefore, construction and operation of the project would not physically interfere with emergency vehicle access or personnel evacuation from the site.

As described above, increased project-related traffic would not cause a significant increase in congestion and/or significantly worsen the existing operating conditions on area roads; therefore, project-related traffic would not affect emergency access to the project site or any other surrounding location. The project would not require closures of public roads, which could inhibit access by emergency vehicles. For these reasons the project would have a less-than-significant impact on emergency access.

Mitigation Measures

No mitigation measures required.

Level of Significance

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 3.8, *Cumulative Effects Overview*, of this EIR discusses cumulative projects near the project. **Table 3-8, Cumulative Projects List**, in Chapter 3, *Project Description*, lists specific projects considered in the cumulative impact analysis. For VMT, the geographic scope for cumulative impacts is the transportation planning region, which is Kern County as a whole. This geographic scope of analysis is appropriate for VMT due to the regional nature of travel demand. However, as described in Impact 4.15-2, the project is not subject to VMT impact analysis, and would not contribute to a regional impact.

For travel safety, the project would increase use of the ingress/egress on W. Lokern Road. Construction activity could create a temporary hazard to vehicular traffic. Therefore, the project would require

implementation of MM 4.15-1 and MM 4.15-2, which requires construction of site access to County standards and implementation of a Construction Traffic Control Plan. Implementation of these mitigation measures would ensure the project cumulative impact related to hazards associated with design features would be reduced to less than significant (not cumulatively considerable). Therefore, the project would not contribute considerably to a cumulative transportation impact and cumulative impacts would be less than significant with mitigation.

Mitigation Measures

Implement MM 4.15-1 and MM 4.15-2.

Level of Significance after Mitigation

With implementation of MM 4.15-1 and MM 4.15-2, impacts would be less than significant.

4.16.1 Introduction

This section of the 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 a cultural resources assessment prepared by Discovery Works, Inc. (Discovery Works) and included as Appendix E, and the results of the Native American consultation conducted by the County for purposes of compliance with CEQA requirements prompted by Assembly Bill 52 (AB 52), as well as Senate Bill (SB) 18.

The Native American Heritage Commission (NAHC) provided a scoping comment letter in response to the Notice of Preparation, describing the consultation requirements of AB 52 and SB 18. All scoping letters are included in Appendix A of this EIR.

4.16.2 Environmental Setting

Refer to Section 4.5, *Cultural Resources*, of this EIR for further discussion related to archaeological and historic resources.

Regional Pre-Contact History and Ethnography

As discussed in Section 4.5, “Cultural Resources,” the project site is within the Antelope Plain area of Southern San Joaquin Valley. Early archaeological investigations of the Southern San Joaquin Valley indicate human habitation for at least 8,000 years and archaeological sites around Tulare and Buena Vista lakes confirm the early use of this region. Occupation sites along Buena Vista Lake that date 4,000 years ago, have yielded stone grinding implements which show a shift in substance use of these lakes and marshes. By the historic period, 1400-1700 Anno Domini (A.D.), the Yokuts Indians occupied the area.

The Chuxoxi (or Tuhohi) lived in the area of the Kern River delta, which includes the project site. Each Yokuts group spoke a different dialect but lived a similar lifestyle consisting of fishing, hunting waterfowl, and collecting shellfish, roots, and seeds. Given the location of their villages, much of their materials for storage of baskets, cookware, roof structures, and balsa boats consisted of tule. Stone was obtained for grinding and cutting tools by trade.

By 1850, the Yokuts population in the Buena Vista Lake region had declined from an estimate of 1,300 to 280. European diseases and forced removal by the Spanish Franciscan missions greatly impacted these tribal groups. Further, the wide-open landscape where they lived provided little shelter from the numerous Euro-Americans coming during the gold rush and later settlers to the region (Appendix E).

Existing Tribal Cultural Resources

Native American Correspondence and SB 18 and AB 52 Consultation

As described in Section 4.5, “Cultural Resources,” as part of the information-gathering process for the cultural resources technical report, and separate from the County’s required AB 52 consultation, Discovery Works contacted the California Native American Heritage Commission (NAHC) to request a record search of the Sacred Lands File (SLF) and for a list of interested Native American organizations in the area to solicit comments about the proposed project. The SLF search conducted by the NAHC indicated that no Native American cultural resources are known be located within the project site.

As further described in Section 4.16.3 “Regulatory Setting,” AB 52 applies to those projects for which a lead agency had issued a notice of preparation of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration on or after July 1, 2015. Consultation under AB 52 was offered by Kern County to the following Tribes:

- San Manuel Band of Mission Indians
- Twenty-Nine Palms Band of Mission Indians

On January 1, 2017, Lee Claus, Cultural Resources Management Director of the San Manuel Band of Mission Indians (SMBMI), responded to Kern County’s AB 52 and SB 18 consultation request. The response stated that SMBMI would not be requesting AB 52 nor SB 18 consultation, nor would they be requesting participating in project scoping, development, and/or review.

Anthony Madrigal, Jr., Tribal Historic Preservation Officer (THPO) for the Twenty-Nine Palms Band of Mission Indians, responded to Kern County’s AB 52 and SB 18 consultation request on January 17, 2017, indicating that the THPO is not aware of any archaeological or cultural sites or properties in the project area that pertain to the Twenty-Nine Palms Band of Mission Indians. However, if inadvertent discoveries of archaeological remains or resources occur, the THPO notes that construction efforts should stop immediately, and appropriate agency and tribal representatives should be notified.

Tribal Cultural Resources Recorded within the Project Site

A pedestrian, archaeological, and field survey was conducted at the project site on January 10, 2019. As described in the *Cultural Resource Study Report* prepared for the project, as well as Section 4.5, “Cultural Resources,” the archaeological survey conducted for the project site did not indicate any previous prehistoric or historic use. Two historic-era isolates were identified during the site survey (e.g., bottles/cans) (Appendix E). In general, isolates lack archaeological context and typically do not provide sufficient information to be considered significant resources.

No tribal cultural resources were identified or recorded during the pedestrian, archaeological, and field survey and no known tribal cultural resources exist within the project site.

4.16.3 Regulatory Setting

Federal

There are no applicable federal regulations for this issue area.

State

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires public agencies to consider the effects of their actions on “tribal cultural resources.” Public Resources Code Section 21084.2 establishes that “[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.”

Tribal Cultural Resources

CEQA requires lead agencies to consider whether projects will affect tribal cultural resources. PRC Section 21074 states:

- a) “Tribal cultural resources” are either of the following:
 - 1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
 - 2) 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
- b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
- c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act (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. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner. Specifically, if the remains are those of a Native American, the coroner must notify the NAHC, which notifies and has the authority to designate the most likely descendant of the deceased. The act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Health and Safety Code, Sections 7050.5

Section 7050.5 of the Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If they are determined to be those of a Native American, the coroner must contact NAHC.

Public Resources Code, Section 5097

PRC Section 5097 specifies the procedures to be followed if human remains are unexpectedly discovered on nonfederal land. The disposition of Native American burials falls within the jurisdiction of NAHC. Section 5097.5 of the code states:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

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 California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR) or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources update to Appendix G of the 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.

Senate Bill 18

SB 18 (Statutes of 2004, Chapter 905), which went into effect January 1, 2005, requires local governments (city and county) to consult with Native American tribes before making certain planning decisions and to provide notice to tribes at certain key points in the planning process. The intent is to "provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places" (OPR 2005, as cited in Appendix E). The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level, land use designations are made by a local government. The consultation requirements of SB 18 apply to general plan or specific plan processes proposed on or after March 1, 2005. According to the Tribal Consultation Guidelines: Supplement to General Plan Guidelines (OPR 2005, as cited in Appendix E), the following are the contact and notification responsibilities of local governments:

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive

notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code Section 65352.3).

- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45- day comment period (Government Code Section 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.
- Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code Section 65092).
- In accordance with SB 18 and the California Tribal Consultation guidelines, the appropriate native groups were consulted with respect to the project's potential impacts on Native American places, features, and objects.

California Native American Graves Protection and Repatriation Act (NAGPRA) of 2001

Codified in the California Health and Safety Code Sections 8010–8030, the California Native American Graves Protection and Repatriation Act 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.

Local

Kern County General Plan

Construction, operation, and closure of the Facility would be subject to policies and regulations contained within the general and specific plans, including the Kern County General Plan, Kern County Zoning Ordinance, and the Kern County Code of Building Regulations, which include policies, goals, and implementation measures related to tribal cultural resources. There are no policies, goals, and implementation measures in the Kern County General Plan related to tribal cultural resources that are applicable to the project. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and not specific to development, such as the project. These measures are not listed below, but as stated in Chapter 2, Introduction, all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

4.16.4 Impacts and Mitigation Measures

Methodology

PRC Section 21074 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 listed or determined eligible for listing in the CRHR, listed in a local register of historical resources, or otherwise determined by the lead agency to be a tribal cultural resource.

The analysis of tribal cultural resources is based on the AB 52 and SB 18 consultation efforts. The analysis for tribal cultural resources is also informed by the provisions and requirements of federal, state, and local laws and regulations that apply to cultural resources. In determining the level of significance, the analysis assumes that the project would comply with relevant federal and state laws, regulations, and ordinances.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

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

A project would have a significant impact on tribal cultural resources if it would:

- 1) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
 - b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Project Impacts

Impact 4.16-1a: The project could 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 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

As described above, the SLF search conducted by the NAHC indicated that no tribal cultural resources are known to be located within the project site. Additionally, no tribal cultural resources were identified or recorded during the pedestrian, archaeological, and field survey (Appendix E). Further, tribal consultation did not yield any information regarding known tribal cultural resources within the project site and both the San Manuel Band of Mission Indians and Twenty-Nine Palms Band of Mission Indians declined to participate in AB 52 and SB 18 tribal consultation.

Implementation of the project would involve earthmoving activities associated with expansion of the existing Facility, including the non-hazardous solid waste portion of the Facility, as well as construction of the four tank treatment buildings, as discussed in Chapter 3, "Project Description." Though no known tribal cultural resources have been identified within the project site, the potential to encounter previously undiscovered subsurface features exists through project construction (i.e., earthmoving) activities. The damage and/or destruction of previously undiscovered subsurface features could adversely change the significance of materials or sites that may qualify as a tribal cultural resource.

Implementation of Mitigation Measures MM 4.5-1 through MM 4.5-2, included in Section 4.5, *Cultural Resources*, would reduce potential impacts to tribal cultural resources resulting from implementation of the proposed project to a less-than-significant level. These measures require cultural resources sensitivity training for construction workers, appropriate treatment of unearthed cultural resources during construction, and proper procedures for recording and treating human remains if discovered during project construction. With implementation of Mitigation Measures MM 4.5-1 through MM 4.5-2, included in Section 4.5, *Cultural Resources*, impacts to listed or eligible tribal cultural resources would be less than significant.

Mitigation Measures

Implementation of Mitigation Measure MM 4.5-1 and MM 4.5-2 would be required.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.5-1 and MM 4.5-2, impacts would be less than significant.

Impact 4.16-1b: The project could cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources 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 Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

As described above, no known tribal cultural resources are located within the project site and no tribal cultural resources were identified or recorded during the pedestrian, archaeological, and field survey (Appendix E). Further, no tribal groups have formally requested to participate in AB 52 or SB 18 tribal consultation with Kern County.

As discussed in Impact 4.16-1, above, project ground-disturbing activities could result in the discovery of previously undisturbed subsurface features. Implementation of Mitigation Measures MM 4.5-1 through MM 4.5-2, included in Section 4.5, *Cultural Resources*, would reduce potential impacts to a less-than-significant level.

Mitigation Measures

Implementation of Mitigation Measure MM 4.5-1 and MM 4.5-2 would be required.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.5-1 and MM 4.5-2, impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative Setting

As described in Chapter 3, *Project Description*, multiple projects are proposed throughout Kern County and northern Los Angeles County (See Table 3-8, *Cumulative Project List*). The geographic scope for cumulative impacts to tribal cultural resources includes the Southern San Joaquin Valley. This geographic

scope of analysis is appropriate because the resources within this area are expected to be similar to those that may occur within the project area because of their proximity, their similarities in environments and landforms, and their location within the same Native American tribal territories. This is a large enough area to encompass any effects of the project on tribal cultural resources that may combine with similar effects caused by other projects and provides a reasonable context wherein cumulative actions could be cumulatively considerable and affect tribal cultural resources.

Multiple projects are proposed throughout Kern County, including those that would involve ground disturbance and have the potential to encounter known and unknown tribal cultural resources. Cumulative impacts to tribal cultural resources could occur if past, present, or future projects, in conjunction with the proposed project, had or would have impacts on tribal cultural resources. When considering past, present, and future project's impacts to tribal cultural resources together, this would represent a significant cumulative impact.

Potential impacts of the project to tribal cultural resources, in combination with other projects in the area, could contribute to a cumulatively significant impact due to the overall loss of resources unique to the region. However, as discussed above, no tribal cultural resources have been identified within or in the vicinity of the project sites and the project would not result in a significant impact to tribal cultural resources with implementation of prescribed mitigation measures. Therefore, the project's incremental effect is not cumulatively considerable when considered with the effects of other closely related past projects, the effects of other current projects, and the effects of probable future projects. Thus, the project would not have a cumulatively considerable contribution to impacts to tribal cultural resources with the implementation of Mitigation Measures 4.5-1 and 4.5-2, included in Section 4.5, *Cultural Resources*, and cumulative impacts would be less than significant.

Mitigation Measures

Implementation of Mitigation Measure MM 4.5-1 through MM 4.5-2 would be required.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.5-1 and MM 4.5-2, cumulative impacts would be less than significant.

4.17.1 Introduction

This section of the Environmental Impact Report (EIR) describes the affected environment and regulatory setting pertaining to utilities and service systems, which include water, wastewater, stormwater drainage, solid waste, electricity, telephone, and natural gas. Each subsection includes descriptions of existing facilities, service standards, potential impacts, and mitigation measures, where applicable. This section addresses water only in terms of supply services. Hydrology and water quality are covered in Section 4.9, Hydrology and Water Quality, of this EIR. The analysis in this section is based in part on information provided in the Phase 1 Environmental Site Assessment and Water Supply Assessment prepared by Ramboll US Corporation located in Irvine, California for Clean Harbors Buttonwillow, LLC (Appendix K).

4.17.2 Environmental Setting

Water Supply

There are typically three sources of supply water: (1) natural sources; (2) manmade sources; and (3) reclamation. Natural sources include rivers, lakes, streams, and groundwater stored in aquifers. Manmade sources include runoff water that is treated and stored in reservoirs and other catchment structures. Reclaimed water is wastewater that has been conveyed to a treatment plant and then treated to a sufficient degree that it may again be used for certain uses (such as irrigation). Reclaimed water is not potable (drinkable) and must be conveyed in a separate system in order to ensure that there is no possibility of direct human consumption.

Groundwater provides 39% of the County's water supply, including the project site. Since groundwater quality within the project area is of poor quality, the area must rely totally on imported surface water supplies for potable water needs.

Groundwater Supply

The Facility is located in eastern Kern County. It is not located in a water district or served by a public water system and there is no Urban Water Management Plan (UWMP) that accounts for the project's water demand. Potable water is brought to the Facility in a dedicated water tanker truck and placed in a 10,000-gallon tank. Approximately 10,000 gallons are delivered every week. The annual potable water use at the Facility is estimated to be 480,000 gallons or 1.5 AF. Bottled water is supplied to the Facility for drinking purposes. Groundwater is pumped from the on-site water well for non-potable water use during construction and operation. During construction, approximately 0.8 million gallons are used monthly and during operation, approximately 1.76 million gallons are used monthly.

The Facility is in the Tulare Lake Hydrologic Region which comprises of 12 distinct groundwater basins and 7 subbasins. The Tulare Lake Basin Hydrologic Region consists of approximately 17,000 square miles and includes most of Kern and Fresno Counties and all of Tulare and Kings Counties.

The project site is located over the San Joaquin Valley Groundwater Basin (Basin No. 5-22)/Kern County Groundwater Subbasin area (Subbasin No. 5-22.14). The Kern County Groundwater Subbasin covers about 3,000 square miles in Kern County. It is bounded by the Kern, Kings, and Tulare County lines to the north, the granitic bedrock of the Sierra Nevada and Tehachapi Mountains to the east and south-east, and the marine sediments of the San Emigdio Mountains and Coast Ranges to the southwest and west. The Kern River, which originates in the Sierra Nevada, is the primary stream flowing through the subbasin area.

The Kern County subbasin's water-bearing units consist, from youngest to oldest, of younger alluvium/floodplain deposits, older alluvium/stream deposits, the Tulare and Kern River formations, and the Olcese and Santa Margarita formations. The older alluvium/stream deposits and the underlying Tulare and Kern River formations form the primary aquifers in the subbasin. Municipal/irrigation wells are up to 1,200 feet deep and yield up to 4,000 gallons per minute (GPM) (DWR 2006).

The primary sources of recharge are from the Kern River and artificial recharge at groundwater banking facilities that exist throughout most of the subbasin area. Secondary sources of recharge include return flows from agricultural and municipal irrigation and infiltration of flows from intermittent streams along the edge of the subbasin. The primary sources of groundwater discharge are water pumped for irrigation and municipal supply.

California Department of Water Resources (DWR) has implemented the California Statewide Groundwater Elevation Monitoring (CASGEM) program. Through CASGEM, California's basins and subbasins are prioritized as very low, low, medium, or high in terms of select criteria such as reliance on groundwater, number of wells and population, irrigated acreage, and groundwater impacts. The Kern County subbasin was assigned a high CASGEM groundwater priority ranking.

The Kern County subbasin is identified by the Sustainable Groundwater Management Act (SGMA) as critically overdraft and subject to SGMA regulations. The Kern Groundwater Authority (KGA) was formed on April 26, 2017, to manage the basin, including preparation and implementation of the required GSP (Aquilogic, Inc. 2019).

Groundwater Quality

A general measure of groundwater quality is total dissolved solids (TDS). For drinking water purposes, water with a TDS concentration of 500 milligrams per liter (mg/L) or less is recommended but can be usable up to 1,000 mg/L. The project site has an on-site water well which is used to draw water from the lower water table zone at approximately 600 feet below ground surface. Since the groundwater quality in the Facility vicinity is considered poor and typical of the groundwater quality in the portion of San Joaquin Valley, TDS typically exceeds 2,000 mg/l.

Surface Water

Since groundwater quality in the project area is of very poor quality, the area relies on imported surface water supplies for potable water. The project site is surrounded by undeveloped land where drainage occurs as overland sheet flow within existing drainage channels that drain towards the northeast. However, the project site, as an existing solid waste disposal site, is designed to contain runoff from a 24-hour 1,000-year storm event (defined as an event that has a 0.1 % chance of occurring in any given year) as required by Title 27 of the California Code of Regulations.

Two relic drainage features, Drainages A and B, and their associated tributaries bisect the eastern portion of the project site, from southwest to northeast. Lokern Road and the existing Clean Harbors Facility hydrologically isolate the project site such that the features on site effectively do not have an upstream watershed, only receive runoff from local precipitation, and no longer convey concentrated flows or exhibit hydrological indicators. Additionally, unconcentrated flows that originate on site flow toward the northeast, beneath the California Aqueduct via an at-grade crossing and are then impounded into an unnamed reservoir by a series of levees approximately one mile northeast of the project site. Therefore, flows originating on site do not reach the downstream Kern River Flood Canal, and are considered isolated.

Lokern Road and the existing Clean Harbors Facility hydrologically isolate Drainages A and B associated tributaries within the project site from the upstream watershed, such that the features on site no longer convey concentrated flows or exhibit hydrological indicators. Additionally, unconcentrated flows that originate on site are impounded by an unnamed reservoir and do not reach the Kern River Flood Canal, as described above.

Summary of Existing Water Use

The existing landfill utilizes both groundwater and water imports. Water for drinking, sanitary showers, laboratory use, domestic use, and irrigation at the Facility is provided by the Facility water supply system. As noted previously, potable water is brought to the Facility by Interstate 5 Utility in a dedicated water tanker truck and placed in a 10,000-gallon tank. Approximately 10,000 gallons are delivered every week. The annual potable water use at the Facility is estimated to be 480,000 gallons or 1.5 AF. Bottled water is supplied to the Facility by Nestle Waters for drinking. Groundwater is pumped from the on-site water well for non-potable water use during operational activities and other operational activities. During operation, approximately 1.76 million gallons are used monthly. Construction WMUs also requires use of well water. During construction, approximately 0.8 million gallons are used monthly.

Wastewater

The Kern Sanitation Authority provides maintenance and wastewater service for Kern County. The project site is not supported by Kern Sanitation Authority infrastructure. The existing Facility includes a septic system.

Sanitary facilities are provided at the Facility for landfill employees in accordance with 27 CCR, Section 21600(b)(5)(C). Sanitary facilities, including showers, are located near the main administrative building. Additional portable toilets are provided around the site, as needed, to accommodate construction and other activities on-site. Sources of drinking water include bottled water.

Stormwater Drainage

As discussed in Chapter 3, *Project Description*, Kern County's geography is diverse, containing mountainous areas, agricultural lands, and desert areas. These areas are generally divided into three regions: the Valley Region, the Mountain Region, and the Desert Region. The project site is located within the Valley Region, which is characterized by relatively low rainfall, relatively high average summer temperatures, and generally mild winters. Winter months are mild with temperatures averaging 20 degrees Fahrenheit (°F) to 50°F. Summers are harsh and dry with temperatures ranging from 60°F to over 100°F.

The topography of the project site is relatively flat with a gentle downward slope to the northeast with elevations ranging from approximately 335 feet above mean sea level (msl) near the northeast corner to 415 feet above msl near the southwest site boundary. According to the most recent Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the area, the majority of the project site is located within Flood Zone X, with a 0.2-percent-annual-chance (or 500-year) flood. The FIRM shows that the northwest corner of the site is located within the designated 100-year Special Flood Hazard Area (SFHA) floodplain (FEMA 2022). As discussed below, this designation may not reflect actual conditions.

The project site is surrounded by undeveloped land where drainage occurs as overland sheet flow within existing drainage channels that drain towards the northeast. However, the project site, as an existing solid waste disposal site, is designed to contain runoff from a 24-hour 1,000-year storm event. A re-evaluation of the 100-year floodplain using updated topographic information and more detailed hydrologic and hydraulic methods was performed and included as part of the Joint Technical Document (Geosyntec 2018). The floodplain study determined that the existing floodplain extents are based on an April 2015 topography and may not reflect current conditions.

Two relic drainage features, Drainages A and B, and their associated tributaries bisect the eastern portion of the project site, from southwest to northeast. Lokern Road and the existing Clean Harbors Facility hydrologically isolate the project site such that the features on site effectively do not have an upstream watershed, only receive runoff from local precipitation, and no longer convey concentrated flows or exhibit hydrological indicators. Additionally, unconcentrated flows that originate on site flow toward the northeast, beneath the California Aqueduct via an at-grade crossing and are then impounded into an unnamed reservoir by a series of levees approximately one mile northeast of the project site. Therefore, flows originating on site do not reach the downstream Kern River Flood Canal, and are considered isolated.

Lokern Road and the existing Clean Harbors Facility hydrologically isolate Drainages A and B associated tributaries within the project site from the upstream watershed, such that the features on site no longer convey concentrated flows or exhibit hydrological indicators. Additionally, unconcentrated flows that originate on site are impounded by an unnamed reservoir and do not reach the Kern River Flood Canal, as described above.

Solid Waste

Solid waste generally refers to garbage, refuse, sludge, and other discarded solid materials that are generated by residential, industrial, and commercial activities. Construction, demolition, and inert wastes are also classified as solid waste. Such wastes include nonhazardous building materials such as asphalt, concrete, brick, drywall, fencing, metal, packing materials, pallets, pipe, and wood. The general waste classifications used for California waste management units, facilities, and disposal sites are outlined below. Nonhazardous solid waste consists of organic and nonorganic solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes, and other discarded waste, provided that such wastes do not contain hazardous materials or soluble pollutants in concentrations that would exceed applicable water quality objectives or cause a degradation of waters of the state.

California state law regulates the types of waste that can be disposed of at the different classes of landfills:

- Class I landfills may accept hazardous and nonhazardous wastes;

- Class II landfills may accept designated and nonhazardous wastes; and
- Class III landfills may accept nonhazardous wastes.

Kern County is responsible for meeting the California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939). AB 939 required Counties and Cities to reduce the amount of solid waste being sent to landfills by 50% by January 1, 2000. It also required Counties and Cities to prepare solid waste planning documents. These documents include the Source Reduction and Recycling Element (SRRE), the Household Hazardous Waste Element (HHWE), and the Nondisposal Facility Element (NDFE). All three of these documents, as well as the Integrated Waste Management Plan, approved February 1998 by the California Integrated Waste Management Board (CIWMB; now California Department of Resources Recycling and Recovery [CalRecycle]), have been approved for Kern County. The Kern County Integrated Waste Management Plan is the long-range planning document for landfill facilities.

Construction and demolition (C&D) waste is heavy, inert material. This material creates significant problems when disposed of in landfills. Because C&D waste is heavier than paper and plastic, it is more difficult for counties and cities to reduce the tonnage of disposed waste. For this reason, C&D waste has been specifically targeted by the State of California for diversion from the waste stream. Projects that generate C&D waste should emphasize deconstruction and diversion planning rather than demolition. Deconstruction is the planned, organized dismantling of a prior construction project, which allows maximum use of the deconstructed materials for recycling in other construction projects and sends a minimum amount of the deconstruction material to landfills.

The Kern County Public Works Department (KCPWD) provides the management of liquid and solid waste. Kern County currently operates seven recycling and sanitary landfills, six transfer stations, and one bin site. Waste streams arrive at disposal sites through either residential/urban collection or through transportation of waste by individuals to the sites. Accepted waste streams include appliances, construction material, dead animals, electronics, furniture, green waste, general waste, tires, treated wood, and used motor oil. The McKittrick Waste Landfill is the closest to the project site, 12.2 miles south. This facility only accepts non-hazardous materials.

The existing landfill Facility is approved to accept liquids, solids, semi-solids and sludge, inorganic and organic waste, listed hazardous waste, RCRA waste with heavy metals and organics, non-hazardous waste, oil and water mixtures, PCP disposal, radioactive waste such as Naturally Occurring Radioactive Material (NORM) and Technologically Enhanced Naturally Occurring Radioactive Material (TENORM), and transportation and logistics.

Electrical Service

Pacific Gas & Electric (PG&E), a subsidiary of Sempra Energy, is the electricity provider in Kern County and the project site. Powerlines extend along Lokern Road, across from the project site, via an overhead connection.

Natural Gas

PG&E and the Southern California Gas Company (SoCalGas), a subsidiary of Sempra Energy, are the natural gas providers in Kern County. The project site is not served by natural gas.

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 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.

Because the site is larger than 1 acre, it requires compliance with NPDES criteria, including preparation of a Storm Water Pollution Prevention Plan (SWPPP) and the inclusion of best management practices (BMPs) to control erosion and off-site transport of soils. Additional information on the project's NPDES permitting requirements, as well as SWPPP requirements, is presented in Section 4.10, *Hydrology and Water Quality*.

State

Regional Water Quality Control Board

The primary responsibility for the protection of water quality, including stormwater, in California rests with the State Water Resources Control Board (SWRCB) and nine RWQCBs, collectively called the California Water Boards. 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 site is within the jurisdiction of the Central Valley RWQCB.

California Department of Water Resources

The DWR is responsible for protecting, conserving, developing, and managing much of California's water supply. These duties include preventing and responding to floods, droughts, and catastrophic events; informing and educating the public on water issues; developing scientific solutions; restoring habitats; planning for future water needs, climate change impacts, and flood protection; constructing and maintaining facilities; generating power; ensuring public safety; and providing recreational opportunities.

California Water Code Section 13260

California Water Code Section 13260 requires any person who discharges waste, other than into a community sewer system, or who proposes to discharge waste that could affect the quality of waters of the State to submit a report of waste discharge to the applicable RWQCB. Any actions of the projects that would be applicable under California Water Code Section 13260 would be reported to the Central Valley RWQCB.

Senate Bills 610 (Chapter 643, Statutes of 2001) and 221 (Chapter 642, Statutes of 2001)

Senate Bill (SB) 610 and SB 221 are companion measures that seek to promote more collaborative planning among local water suppliers and Counties and Cities. They require that water supply assessment occur early in the land use planning process for all large-scale development projects. If groundwater is the proposed supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during single and multiple dry years presented in 5-year increments for a 20-year projection.

An SB 610 WSA must be prepared if the following three conditions are met:

1. The project is subject to the California Environmental Quality Act (CEQA) under Water Code Section 10910;
2. The project meets criteria to be defined as a "Project" under Water Code 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 Water Code Section 10912 if it is:

1. 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; and
2. 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 (DWR 2003).

The projected water supply may be determined to be sufficient or insufficient for the proposed project, per Water Code Section 10910, if the projected water demand associated with the proposed project was not accounted for in the most recently adopted UWMP. If the public water system has no UWMP, the water assessment for the proposed 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.

Sustainable Groundwater Management Act

The SGMA was enacted by the State in 2014 and requires that by January 31, 2020, "basins that are subject to critical conditions of overdraft shall be managed under a groundwater sustainability plan." The SGMA provides for the establishment of groundwater sustainability agencies (GSAs) that are meant to develop GSPs to monitor and regulate the interests of all beneficial uses and users of groundwater within each plan's management area. The Kern County subbasin is considered to be in a state of critical overdraft by the DWR. As such, groundwater use in the subbasin must be regulated by one or more GSPs by the end of January 2020. The SGMA requires that a GSP achieve "sustainable groundwater management" and avoid "undesirable results," defined under Water Code Section 10721(w) as meaning: chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply; significant and

unreasonable reduction of groundwater storage; significant and unreasonable seawater intrusion; significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies; significant and unreasonable land subsidence that substantially interferes with surface land uses; and/or surface water depletions that have significant and unreasonable adverse impacts on beneficial uses of surface water. The BVGSA recently completed a GSP to satisfy the requirements of the SGMA.

California Department of Resource, Recycling, and Recovery

On January 1, 2010, California's recycling and waste diversion efforts were streamlined into the new CalRecycle. CalRecycle manages programs created through two landmark initiatives, the Integrated Waste Management Act and the Beverage Container Recycling and Litter Reduction Act, which were formerly part of the CIWMB and the California Department of Conservation (CDOC). Now housed in the California Natural Resources Agency, CalRecycle merges the duties of the board with those of the CDOC's Division of Recycling to best protect public health and the environment by effectively and efficiently managing California's waste disposal and recycling efforts.

CalRecycle is currently comprised of two program divisions: Waste Management and Recycling. The Division of Waste Management continues to promote the goals of Zero Waste California in partnership with local government, industry, and the public. The division manages the approximate 93 million tons of waste generated each year by reducing waste whenever possible, decreasing greenhouse gas emissions, promoting the management of all materials to their highest and best use, and regulating the handling, processing, and disposal of solid waste. California now diverts more than half of its waste away from landfills. The Integrated Waste Management Act of 1989 (Public Resources Code [PRC] 40050 et seq. or 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.

Integrated Solid Waste Management Act of 1989 (PRC 40050 et seq.) or Assembly Bill 939

Pursuant to the California Integrated Solid Waste Management Act of 1989, all jurisdictions in California are required to reduce the amount of solid waste disposed in landfills. AB 939 required a reduction of 25% by 1995 and 50% by 2000. Contracts that include work that will generate solid waste, including construction and demolition debris, have been targeted for participation in source-reduction, reuse, and recycling programs. The project proponent is urged to manage solid waste generated by the work to divert waste from disposal in landfills (particularly Class III landfills) and maximize source reduction, reuse, and recycling of construction and demolition debris.

Public Resources Code Section 41820.5 through 41822

PRC Sections 41820.5 through 41822 require jurisdictions to submit a report to CalRecycle summarizing its progress in reducing solid waste. The report must contain a variety of information such as calculations of annual disposal reduction, a summary of progress made in implementing the source reduction and

recycling element and the household hazardous waste element, and other information relevant to waste reduction and diversion.

Senate Bills 610 and 221

Senate Bill (SB) 610 and SB 221, passed in 2001, are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. They require that water supply assessment occur early in the land use planning process for all large-scale development projects. If groundwater is the proposed supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during normal, single and multiple dry years, presented in five-year increments for a 20-year projection. In accordance with these measures, a WSA is required for a proposed industrial, manufacturing, or processing plant that would house more than 1,000 persons; occupy more than 40 acres of land; or have more than 650,000 square feet of floor area (California Water Code, Section 10912).

Senate Bill 1383

SB 1383 approved November 3, 2020 and set to go into effect January 1, 2022, which establishes targets to achieve a 50% reduction in the level of the statewide disposal of organic waste by 2020 and a 75% reduction by 2025. The law provides CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20% of edible food that is currently disposed of is recovered for human consumption by 2025.

Assembly Bill 341

Since the passage of AB 939, diversion rates in California have been reduced to approximately 65%, the statewide recycling rate is approximately 50%, and the beverage container recycling rate is approximately 80%. In 2011, the State passed AB 341, which established a policy goal that a minimum of 75% of solid waste must be reduced, recycled, or composted by the year 2020. The State provided the following strategies to achieve that 75% goal:

1. Moving organics out of the landfill;
2. Expanding the recycling/manufacturing infrastructure;
3. Exploring new approaches for state and local funding of sustainable waste management programs;
4. Promoting state procurement of post-consumer recycled content products; and
5. Promoting extended producer responsibility.

To achieve these strategies, the State recommended legislative and regulatory changes, including mandatory organics recycling, solid waste facility inspections, and revising packaging. With regard to construction and demolition, the State recommended an expansion of the State of California Green Building Code (known as CALGreen) standards that incentivize green building practices and increase diversion of recoverable construction and demolition materials. Current standards require 50% waste diversion on

construction and some renovation projects, although this may be raised to 65% for nonresidential construction in upcoming changes to the standards. The State also recommends promotion of the recovery of construction and demolition materials suitable for reuse, compost, or anaerobic digestion before residual wastes are considered for energy recovery.

California Solid Waste Reuse and Recycling Access Act of 1991 (PRC Chapter 18)

The California Solid Waste Reuse and Recycling Access Act identified a lack of adequate areas for collecting and loading recyclable materials, resulting in a significant impediment to diverting solid waste. This act requires State and local agencies to address access to solid waste for source-reduction, recycling, and composting activities. Each local agency must adopt an ordinance related to adequate areas for collecting and loading recyclable materials for development projects.

California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California.

California Energy Commission

The California Energy Commission (CEC) regulates the provision of natural gas and electricity within the State. The CEC is the State's primary energy policy and planning agency. Created in 1974, the CEC has five major responsibilities: forecasting future energy needs and keeping historical energy data, licensing thermal power plants 50 megawatts (MW) or larger, promoting energy efficiency through appliance and building standards, developing energy technologies and supporting renewable energy, and planning for and directing the State response to energy emergencies.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. In 1911 the CPUC was established by Constitutional Amendment as the Railroad Commission. In 1912 the Legislature passed the Public Utilities Act, expanding the Commission's regulatory authority to include natural gas, electric, telephone, and water companies, as well as railroads and marine transportation companies. In 1946 the Commission was renamed the California Public Utilities Commission. It is tasked with ensuring safe, reliable utility service is available to consumers, setting retail energy rates, and protecting against fraud.

California Urban Water Management Plan

Sections 10610 through 10656 of the California Urban Water Management Planning Act requires "every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (af) of water annually" to prepare, adopt, and file an Urban Water Management Plan (UWMP) with the California Department of Water Resources every five years. The UWMP Act applies to municipal water suppliers that serve more than 3,000 customers or that provide more than

3,000-af per year (afy) of water and requires those suppliers to update their UWMP every five years to demonstrate an appropriate level of reliability in supplying anticipated short-term and long-term water demands during normal, dry and multiple dry years.

Local

Kern County Integrated Waste Management Plan

The Kern County Public Works Department (KCPWD) is required by the State to plan and implement waste management activities and programs in the unincorporated area of the County to assure compliance with AB 939 and subsequent State mandates. The Kern County Integrated Waste Management Plan (IWMP) includes a Source Reduction and Recycling Element, Household Hazardous Waste Element, and Non-disposal Facility Element. The Plan was approved February 1998 by the California Integrated Waste Management Board (now California Department of Resources Recycling and Recovery or CalRecycle). The Kern County IWMP is the long-range planning document for landfill facilities.

Kern County Construction Diversion Requirements per the California Green Building Code

As part of compliance with the CALGreen Requirements that took effect beginning January 2011, Kern County implemented the following construction waste diversion requirements:

- Submittal of a Construction Waste Management Plan prior to project construction for approval by the Kern County Building Department;
- Recycling and/or reuse of a minimum 50% of construction & demolition waste; and
- Recycling or reuse of 100% of tree stumps, rocks and associated vegetation and soils resulting from land clearing.

Kern County Public Works Department Recycling Programs

The Waste Operations Division of the Kern County Public Works Department administers or sponsors the following recycling programs, which contribute toward meeting State-mandated solid waste diversion goals to achieve 75% recycling, composting, or source reduction of solid waste by 2020:

- Recycling programs at landfills to recycle or divert a wide variety of products, such as wood waste, cathode ray tubes, tires, inert materials, appliances, etc.;
- Drop-off recycling centers for household recyclables. The County- and the City-operated drop-off recycling centers, which are located in the unincorporated metropolitan area and the city, may be used by both County and city residents;
- Financial assistance for operation of the City of Bakersfield Green Waste Facility;
- The Kern County Special Waste Facility for the disposal of household hazardous waste. Services are provided to all Kern County residents;
- Semi-annual “bulky waste” collection events, which are held in the Bakersfield area and available to both County and city residents (co-sponsor); and

- An innovative elementary school program called the “EcoHero Show.”

Kern County General Plan

The project site is located within the *Kern County General Plan*. The goals, policies, and implementation measures in the *Kern County General Plan* for utilities applicable to the proposed project are provided below.

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

1.4 Public Facilities and Services

Goals

Goal 1: Kern County residents and businesses should receive adequate and cost effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.

Goal 5: Ensure that adequate supplies of quality (appropriate for intended use) water are available to residential, industrial, and agricultural users within Kern County.

Goal 9: Serve the needs of industry and Kern County residents in a way that does not degrade the water supply and the environment and protect public health and safety by avoiding surface and subsurface nuisances resulting from the disposal of hazardous wastes, irrespective of the geographic origin of the waste.

Goal 10: Ensure landfill capacity for Kern County residents and industries.

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

Policy 9: Applicants for all solid waste disposal facilities (Map Code 3.4) and other waste facilities (Map Code 3.7) shall submit closure plans and financial assurance estimates to guarantee closure in conjunction with approval of the required conditional use permit. The requirement for financial assurances may also be satisfied if a State or federal agency will have lead permit responsibility for approval or operational oversight of the facility and which also will require the posting of financial assurances to guarantee site closure. In conjunction with the financial assurances filed with the County, applicants shall enter into a contract with the County to guarantee site closure.

Policy 10: A designated site for solid waste disposal facilities (Map Code 3.4) shall be protected from encroachment of incompatible land uses and intensive urban development. General Plan map code designations which may be compatible for properties adjacent to or within 1,320 feet of solid waste disposal facilities include the following: Resource designations (8.x), 1.2, 3.3, 5.8, 7.1, 7.2,

and 7.3. Other map code designations may be compatible subject to project-specific CEQA evaluation. Intensive residential uses, community care facilities, schools, hospitals, recreational vehicle parks, and other uses involving sensitive populations, concentrations of people, and other activities will usually be incompatible adjacent to or near solid waste disposal facilities. Health risk assessment analysis prepared by the land use project applicants may be warranted when considering proposals for General Plan amendments, zone changes, conditional use permits, and sensitive uses within 1,320 feet of a designated solid waste facility site.

Policy 11: A solid waste disposal facility (Map Code 3.4) and other waste facilities (Map Code 3.7) shall pay its pro-rata share of upgrading of pertinent County roads.

Policy 12: For solid waste disposal facilities, all necessary permits shall be obtained from the Kern County Environmental Health Services Department, Kern County Waste Management Department, State of California Integrated Waste Management Board, State of California Regional Water Quality Control Board, the appropriate Air Pollution Control District, and all other responsible agencies prior to the commencement of operations.

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

Policy 14: All solid waste disposal facilities shall designate a buffer around the permitted disposal area as defined by the Map Code 3.4 land use designation.

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

Implementation Measures

Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.

Measure D: Involve utility providers in the land use and zoning review process.

1.10.1 General Provisions, Public Services and Facilities

Policies

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

Policy 12: All methods of sewage disposal and water supply shall meet the requirements of the Kern County Public Health Services Department and the California Regional Water Quality Control Board. The County's Public Health Services Department shall periodically review and modify, as necessary, its requirements for sewage disposal and water supply, and shall comply with any new standards adopted by the State for implementation of Government Code Division 7 of the Water Code, Chapter 4.5 (Section 13290-13291.70 (Assembly Bill 885) (2000).

Policy 15: Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by the California Environmental Quality Act (CEQA) documents, staff

analysis, and the applicant, that adequate public or private services and resources are available to serve the proposed development.

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

Implementation Measures

Measure C: Project developers shall coordinate with the local utility service providers to supply adequate public utility services.

Measure D: Involve utility providers in the land use and zoning review process.

Measure E: All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply, and Preservation of Environmental Health Rules and Regulations administered by the County's Public Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site-specific documentation that characterize the quality of upper groundwater in the alternative septic systems would adversely impact groundwater quality. If the evaluation indicated that the uppermost groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant would be required to supply sewage collection, treatment, and disposal facilities.

4.17.4 Impacts and Mitigation Measures

This section evaluates the impacts related to utilities and service systems associated with the project and identifies the thresholds used to determine 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 utilities and service systems associated with construction and operation of the proposed project were evaluated qualitatively and quantitatively using a variety of resources, including multiple online sources and published documents. The impact analysis pertaining to water supply is based on the WSA prepared for the project provided in Appendix K. In addition, current data obtained from the County and State of California about the capacity of landfills was used to identify potential solid waste impacts. The evaluation of impacts is based on professional judgement, analysis of Kern County's land use policies, and significance criteria adopted by Kern County in the *Kern County CEQA Implementation Document*, which was determined by Kern County to be appropriate criteria for this EIR. The discussion below describes project-specific impacts and provides measures that would be incorporated to mitigate and reduce potential impacts to the extent feasible.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

The *Kern County CEQA Implementation Document* and *Kern County Environmental Checklist* identify the following criteria, as established in Appendix G of the *State CEQA Guidelines*, to determine if a project could potentially have a significant adverse effect related to utilities and service systems.

The Kern County Environmental Checklist states that a project would normally be considered to have a significant impact related to utilities and service systems if it would:

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- b) Have 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 inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

- d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- e) Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.

Project Impacts and Mitigation Measures

Impact 4.17-1: The project would not 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.

Operation

Water

During construction, bottled potable water would be brought to the project site for drinking needs for construction workers. Water demand during construction of the proposed project would be approximately 2.4 AF over a 9-month period (approximately 22.1 AFY), and would primarily be used for soil compaction, dust control and truck wash out needs. During construction, water would be supplied by Interstate Utility 5 and would be trucked in to the project site. Bottled water would be provided for drinking. Each of these potential providers have existing water rights in excess of the supply needed for construction activities. Therefore, no relocation or construction of new or expanded water facilities would be required and impacts would be less than significant.

Wastewater

The project would generate a minimal volume of wastewater. During construction activities, wastewater would be contained within portable toilet facilities and would be trucked offsite and disposed of at an approved disposal site. The Kern County Environmental Health Services Division is responsible for monitoring the use of portable toilet facilities, and a condition of approval would require the project proponent to provide documentation of a portable toilet pumping contract. Wastewater from the concrete construction activities would be contained within portable facilities and disposed of at an approved site. No offsite sewage or disposal connections to a municipal sewer system exist or are proposed. Therefore, no relocation or construction of new or expanded wastewater or wastewater treatment facilities would be required and no impact would occur.

Stormwater Drainage

The project site and the surrounding area are presently drained by natural drainage channels, and sheet flow and does not rely on constructed stormwater drainage. Streams and drainage at the project site and in the surrounding area are ephemeral. The existing pattern and concentration of runoff could potentially be altered by project activities. The proposed project would not include the creation of new impervious surfaces on the project site, but would include both a liner system and drainage control features consistent with the criteria

and objectives stated in Title 27 CCR, Sections 20310(a-g), 20320, and 21600(b)(4)(AE) and 21760(a). The project would therefore not increase the rate or amount of surface runoff. These changes would not substantially increase the amount of storm water runoff from the project site. Further evaluation of the storm water drainage of the site can be found in Section 4.10, *Hydrology and Water Quality*, of this EIR.

In compliance with National Pollutant Discharge Elimination System (NPDES) General Construction Permit requirements, the proposed project would design and submit a site-specific Storm Water Pollution Prevention Plan (SWPPP) to minimize the discharge of wastewater during construction and a Water Quality Management Plan that include best management practices (BMPs) for runoff control.

Therefore, the proposed project is not expected to exceed the capacity of existing storm water drainage systems in the and relocation or construction of new or expanded stormwater drainage facilities would not be required. Impacts would be less than significant.

Electric Power

Electrical facilities are located on the project site. Electricity is not expected to be consumed in large quantity during project construction, as construction equipment and vehicles are not electric (diesel- or gas-powered). However, electricity is expected to be consumed from water use during construction. Electricity for construction would be provided by PG&E. Because construction of the project would not displace existing electrical facilities, and would tie into existing off-site facilities, relocation of electrical facilities would not be required.

Natural Gas

Natural gas services are provided by SoCalGas in the project vicinity. The Facility does not currently use natural gas. The proposed project would not require natural gas service.

Telecommunications

Existing telecommunication facilities are located onsite.

Operation

Water

As noted previously, potable water is brought to the Facility in a dedicated water tanker truck. Groundwater is pumped from the on-site water well for non-potable water use during operational activities. The amount of non-potable water use increase will vary day to day, however, this temporary increase is expected to be minor. During operation, non-potable water use at the Facility is not expected to change over existing conditions. Total non-potable water demand during operation of the proposed project would be 64.7 AFY. Water would be supplied by Interstate Utility 5 and would be trucked in to the project site. This potential provider has existing water rights in excess of the supply needed for WMU activities. As mentioned above, bottled water would be provided for potable water demand. Therefore, operation of the project would not require the relocation or construction of new or expanded water facilities such that a significant impact would occur and operational impacts would be less than significant.

Wastewater

The proposed project would not require a septic system to be built within the WMU facility in order to accommodate wastewater disposal for the additional employees that would be at the facility. This existing septic system at the facility would treat sewage for the expanded facility. No offsite sewage or disposal connections to a municipal sewer system exist or are proposed. Therefore, no relocation or construction of new or expanded wastewater or wastewater treatment facilities would be required and no impact would occur.

Stormwater Drainage

Stormwater runoff is internally managed at the Facility and monitored in accordance with the current SWPPP for existing operations. Operations of the proposed project be required to implement similar drainage control requirements which would include measures to minimize erosion or sedimentation. The proposed project would not include the creation of new impervious surfaces on the project site, but would include both a liner system and drainage control features consistent with the criteria and objectives stated in Title 27 CCR, Sections 20310(a-g), 20320, and 21600(b)(4)(AE) and 21760(a). The final cover system would be relatively impervious and would also be designed consistent with Title 27 CCR. The runoff would be managed onsite consistent with Title 27 CCR, Sections 21600(b)(8)(F), 21090(a)(3)(B), 21090(c)(4) and 21790(b)(8)(D) which detail requirements for the drainage and erosion controls for the proposed WMUs. Therefore, relocation or construction of new or expanded stormwater drainage facilities off-site would not be required during operation. See Section 4.10, *Hydrology and Water Quality*, for additional discussion of drainage. Impacts would be less than significant.

Electric Power

Electric power is supplied to the project site by PG&E. Electricity for operation would also be provided by PG&E and it is not expected to be consumed in large quantity during project operation. Because construction of the project would not displace existing electrical facilities, and would tie into existing off-site facilities, relocation of electrical facilities would not be required. The impact would be less than significant.

Natural Gas

Natural gas facilities are already present on site. No natural gas facilities would be required for operation of the project. The project includes the construction and operation of a waste management Facility that would not require heating from natural gas. Therefore, operation of the project would not require the relocation or construction of new or expanded natural gas facilities and no impact would occur.

Telecommunications

Existing telecommunication facilities are located onsite. The proposed project would not increase the demand for telecommunications infrastructure.

Mitigation Measures

No mitigation measures required.

Level of Significance

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.

Water use for construction of the composting Facility would primarily be used for dust suppression during excavation, grading, and compaction. A new sanitary water supply would not be needed for the project because a sanitary water system is currently utilized for the existing landfill and mining operations, which would continue to be used for construction of the proposed Facility.

The overall construction water usage is anticipated to be approximately 2.4 AFY per month for nine months (approximately 22.1 AFY). Non-potable water would be supplied through a water purchase agreement with Interstate Utility 5 and delivered to the site through the existing piping system. It would then be stored in existing on-site tanks.

The proposed landfill Facility would require an estimated annual water demand of up to 129.4 AF during years without construction or 151.5 AF during a year with construction. Water for the composting operation would primarily be used for dust control and other miscellaneous activities during construction and operation. Water required to support the operational phase of the composting Facility would be provided via West Kern Water District (WKWD).

WKWD has recently evaluated its water system supply and entitlements as part of its compliance with the SGMA. The SGMA requires that water agencies prepare a GSP, which analyzes existing water supplies and groundwater levels and implements a plan to ensure that these remain in balance and are sustainable over a long period of time. It should be noted that the project location and water supplier are not located in area that is subject to an Urban Water Management Plan (UWMP).

The WKWD 2015 Urban Water Management Plan presents data related to WKWD's current supplies and outlook for both supply and demand. WKWD primarily pumps groundwater but balances this extraction by recharging its State Water Project (SWP) water and other supplemental water supplies. WKWD has a contract amount of 31,500 AF, however SWP water deliveries are variable and typically less than the full contract amount.

The UWMP has calculated the projected water demand and less deliveries over this same period to develop a water budget. Despite the overall surplus diminishing, it is projected that the WKWD would still have a net positive balance of water supply through 2040, as shown on **Table 4.17-1, WKWD Existing and Future Customer Water Demand**.

TABLE 4.17.4-1: WKWD EXISTING AND FUTURE CUSTOMER WATER DEMAND (AFY)

Type of Water Provided	2015	2030	2040
Potable Water	16,542	15,739	15,927
Raw Water	4,461	4,461	4,461
Recycled Water	0	400	400

TABLE 4.17.4-1: WKWD EXISTING AND FUTURE CUSTOMER WATER DEMAND (AFY)

Type of Water Provided	2015	2030	2040
Total Demand	21,003	20,600	20,788

¹ Units: acre-feet
² Source: WKWD 2015

Each water supply source has its own reliability characteristics. In any given year, the variability in weather patterns around the state may affect the availability of supplies to the Kern River Alluvial Fan and SWP. WKWD was able to provide sufficient water due to agreements with local agencies and an active banking program. In addition to its current water resources, WKWD intends to increase their water reliability by maximizing their banking program. Over time, WKWD has banked approximately 200,000 AF of surplus water, which is an important tool for meeting dry year water demands. WKWD has maintained a positive balance in the banking program and has approximately 10 years of supply currently banked. While the Kern County Groundwater Sub-Basin is in a state of overdraft, WKWD has maintained a net positive balance and helped to reduce the overall overdraft. **Table 4.17-2, WKWD Groundwater Volume Pumped**, depicts WKWD’s estimated groundwater pumping.

TABLE 4.17.4-2: WKWD GROUNDWATER VOLUME PUMPED (AFY)

Basin (Subbasin)	2011	2013	2015
San Joaquin Valley Groundwater Basin (Kern River Alluvial Basin)	18,662	18,342	16,542

¹ Units: acre-feet
² Source: WKWD 2015

Furthermore, the WKWD’s 2015 UWMP, contains existing and projected water supplies and demands for WKWD during normal and dry-year scenarios. During water surplus years, the surplus water will be banked for use in dry years. When surface water supplies are low due to dry conditions the balance can be made up with banked groundwater. Table 4.17-3 provides projected multiple-dry year supplies and demands, which represent water supplies and demands during extended periods of drought conditions when supplies would be reduced. As shown in **Table 4.17-3, WKWD Multiple Dry Year Supply and Demand Comparison**, WKWD expects to have long-term water reliability with adequate supplies to meet water demands in single-dry and multiple-dry years.

TABLE 4.17-3: WKWD MULTIPLE DRY YEAR SUPPLY AND DEMAND COMPARISON

		Water Usage			
		2025	2030	2035	2040
Year 1	Supply Totals	21,500	21,600	21,700	21,800
	Demand Totals	21,500	21,600	21,700	21,800
	Difference	0	0	0	0
Year 2	Supply Totals	20,500	20,600	20,700	20,800
	Demand Totals	20,500	20,600	20,700	20,800
	Difference	0	0	0	0

TABLE 4.17-3: WKWD MULTIPLE DRY YEAR SUPPLY AND DEMAND COMPARISON

		Water Usage			
		2025	2030	2035	2040
Year 3	Supply Totals	18,500	18,500	18,600	18,700
	Demand Totals	18,500	18,500	18,600	18,700
	Difference	0	0	0	0

Source: WKWD 2015

The agreement between the project proponent and WKWD provides access to WKWD’s surface water supply for the project over next 18 years. During water surplus years, the surplus water will be banked for use in dry years. When surface water supplies are low due to dry conditions the balance can be made up with banked groundwater. Therefore, impacts related to inadequate water supply for the proposed landfill Facility would be less than significant.

Conclusion

Based on the analysis provided in the WSA prepared for the proposed project (Appendix K), there are sufficient supplies available to serve the project over the next 20 years. As described in the Water Supply Assessment Report, during construction, future potable water use is expected to temporarily increase due to the temporary increase in employees. The amount of potable water use increase will vary day to day, however, this temporary increase is expected to be minor. During operation, potable water use at the Facility is not expected to change over existing conditions. For non-potable water use, the combined existing ongoing operation and the proposed project estimated future groundwater water demand is 129.4 AF during years without construction or 151.5 AF during a year with construction. This amount of demand is expected to be consistent over the next 20 years. WKWD expects to have long-term water reliability with adequate supplies to meet water demands in single-dry and multiple-dry years through 2040. The proposed project estimated future groundwater water demand would represent less than one percent of WKWD’s expected groundwater pumping. Therefore, based on the Facility’s proximity to the WKWD and its relatively minor pumping demands, it is expected that WKWD’s 2015 UWMP accounts for project demand. In addition, the future groundwater use estimates for the project are conservative and will likely be lower through the project’s re-use of collected leachate water. Therefore, no additional resources will be needed to supply the project. Adequate water supplies would be available to meet the demands of the proposed project and impacts related to water supply would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.17-3: The project would not result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

As previously mentioned, the project would generate a minimal volume of wastewater. During construction activities, wastewater would be contained within portable toilet facilities and would be trucked offsite and disposed of at an approved disposal site. Wastewater from any construction activities would be contained within portable facilities and disposed of at an approved site.

During operation, the proposed project would not require a septic system to be built within the WMU facility in order to provide non-potable water for the additional employees that would be at the Facility. The existing septic system would treat sewage for the Facility. No offsite sewage or disposal connections to a municipal sewer system exist or are proposed. As such, no wastewater treatment provider would be needed for the proposed project. The impact would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.17-4: The project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

The Clean Harbors Buttonwillow Facility, permitted to operate under the provisions of Title 27 CCR, is an active public Class I and II solid waste and Class II liquid waste disposal facility.

Construction

It is anticipated the project would generate very limited volumes of waste during construction. Construction wastes resulting from the project would be disposed of at the landfill itself, with few residual materials expected. Spoils from grading and onsite excavation would be retained on the expansion site for future closure of the WMUs. The small volume of solid waste generated by construction activities would not impact the capacity of the facility.

Operation

The proponent is proposing an increase in the non-hazardous waste processing landfill pits on-site so that non-hazardous waste will not be placed in with hazardous waste landfill pits, thus reserving capacity in the hazardous waste disposal areas for additional years.

Maximum daily tonnage (daily design tonnage) is currently 4,050 tons per day, which consists of both hazardous and non-hazardous waste. The proposed project would allow an additional 4,050 tons per day of non-hazardous waste only.

The gross capacity of proposed WMUs 36, 37, and 38 will be 1,348,000, 1,219,000 and 857,000 CY, respectively, for a total additional increase of 3,424,000 CY. The estimated lifetime of the new Class II (nonhazardous) units is a combined 16 years. For the purpose of site life calculations, it was assumed an average daily tonnage of 1,000 tons per day (tpd) and that waste will be accepted in WMU 36, Phase 1 in 2022. For calculation of site life with anticipated disposal rates, it was assumed a total disposal of 253,000 tons into WMU 36, Phase 1 for the 2022 calendar year.

The project would therefore increase the County's non-hazardous solid waste capacity, while maintaining the only Class I hazardous waste disposal units within the County.

The proposed project would not interfere with State and local waste diversion goals. Other County-operated and private facilities within the County provide recycling and composting facilities.

Adverse impacts to solid waste infrastructure would therefore be less than significant, and capacity benefits would be realized by the proposed project.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.17-5: The project would comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.

The existing landfill operations activities follow applicable federal, State, and local management and reduction statutes and regulations related to solid waste. The Clean Harbors Buttonwillow Facility is a Class I and II municipal solid waste and Class II liquid waste sanitary landfill, permitted to operate under the provision of Title 27 CCR. Monthly inspections by the Kern County Public Health Services Department, Environmental Health Division, acting as the Local Enforcement Agency, ensure that all Facility operations operate in accordance with applicable statutes, regulations, and state minimum standards. CalRecycle conducts an 18-month inspection of the landfill along with the Local Enforcement Agency.

In September 2016, SB 1383 established methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants, including methane emissions reductions from organic wastes. SB 1383 established targets to achieve a 50 percent reduction in the level of the statewide disposal of organic wastes (compostable feedstocks, green materials, food material, vegetative food material, etc.) from the 2014 level by 2020 and a 75 percent reduction by 2025. Therefore, the project proponent is charged with implementing programs, services, and capacity to meet the mandated targets. The project is a function of the implementation of SB 1383 and serves as an effort to meet State mandates and meet the regional needs for waste handling and processing. Therefore, no impacts will occur as a result of the proposed project as the project itself serves to meet State management and reduction goals, strategies, and regulations related to solid waste.

As discussed in detail in Impact 4.13-4 above, the project would generate a small volume of solid waste during construction. 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 related to solid waste.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. Section 3.8, *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. As shown in Chapter 3, *Project Description*, Table 3.8, *Cumulative Projects List for Kern County*, there are approximately 6 projects proposed or approved within 6 miles of the project site. While these developments could contribute to the demand for utilities and service systems in Kern County, it is noted that these projects are infrastructure and resource-related projects that would not significantly increase service populations in the project vicinity.

In addition, the proposed project would not increase demand for utilities infrastructure, as described above. Cumulative water supply and demand has been incorporated into the WSA, as required by SB 610, and the project would not result in a cumulative water demand impact.

The proposed project would provide additional solid waste capacity that would reduce cumulative impacts to landfill capacity within the County. Cumulative impacts related to utilities and service systems would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Cumulative impacts would be less than significant.

4.18.1 Introduction

The following section discusses potential impacts related to wildland wildfire impacts. The analysis in this section is based on the project plans, California Department of Forestry and Fire Protection (CAL FIRE) and Kern County Fire Hazards Severity Zone Maps.

4.18.2 Environmental Setting

Site Characteristics and Fire Environment

The California Department of Forestry and Fire Protection (CAL FIRE) maps Fire Hazard Severity Zones (FHSZs), based on factors such fuel, slope, and fire weather to identify the degree of fire hazard throughout California (i.e., moderate, high, or very high). While FHSZs do not predict when or where a wildfire will occur, they do identify areas where wildfire hazards could be more severe and therefore are of greater concern. According to the CAL FIRE, Kern County Fire Hazards Severity Zone Maps for the Local Responsible Areas, the project site is classified as Local Responsibility Area (LRA) Unzoned (see **Figure 4.18-1**, *Fire Hazard Severity Zones – Local and State Responsibility Areas*). The project site is outside of areas identified by CAL FIRE as having substantial or very high risk. Moderate zones are typically wildland supporting areas of low fire frequency and relatively modest fire behavior. The project site is not within a State Responsibility Area (SRA). Vegetation throughout the site is primarily ruderal (see Section 4.4, Biological Resources for a discussion of vegetation communities). Existing development in the project vicinity is generally characterized as irrigated agriculture and undeveloped land. The nearest residential area is located approximately 2.5 miles northeast of the project site. The area immediately south of the project site is categorized as SRA Moderate (see **Figure 4.18-1**, *Fire Hazard Severity Zones – Local and State Responsibility Areas*).

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 California Statewide Fire Map that shows fires back through 2013 (CAL FIRE 2021) and CAL FIRE's Fire and Resource Assessment Program (FRAP) Fire Perimeters: Wildfires 1950-2018 map (CAL FIRE 2019). Based on a review of these maps, no fires in the recorded history have burned across the project site.

Vegetation (Fuels)

The project site consists of the existing Facility, located on an approximately 320-acre parcel, which is largely disturbed, and the 320-acre expansion site. The area of potential disturbance on the expansion site includes 143 acres of shrubland and 86 acres of semi-natural grassland.

4.18.3 Regulatory Setting

Federal

There are no applicable federal regulations for this issue area.

State

2022 California Fire Code

The 2022 California Fire Code (Title 24, Part 9 of the California Code of Regulations) 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 Code focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. Building services and systems are addressed include emergency and standby power systems, electrical equipment, wiring and hazards, and stationary storage battery systems. Chapter 33 (Fire Safety During Construction and Demolition) of the Code outlines general fire safety precautions to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment and promote prompt response to fire emergencies. 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 areas.

2022 California Building Code, Chapter 7A

Part 2 Chapter 7A of the 2022 California Building Code details the materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a Wildland-Urban Interface Fire Area. A Wildland-Urban Interface Area is defined in Section 702A as a geographical area identified by the state as a “Fire Hazard Severity Zone” in accordance with the Public Resources Code Sections 4201 through 4204 and Government Code Sections 51175 through 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.

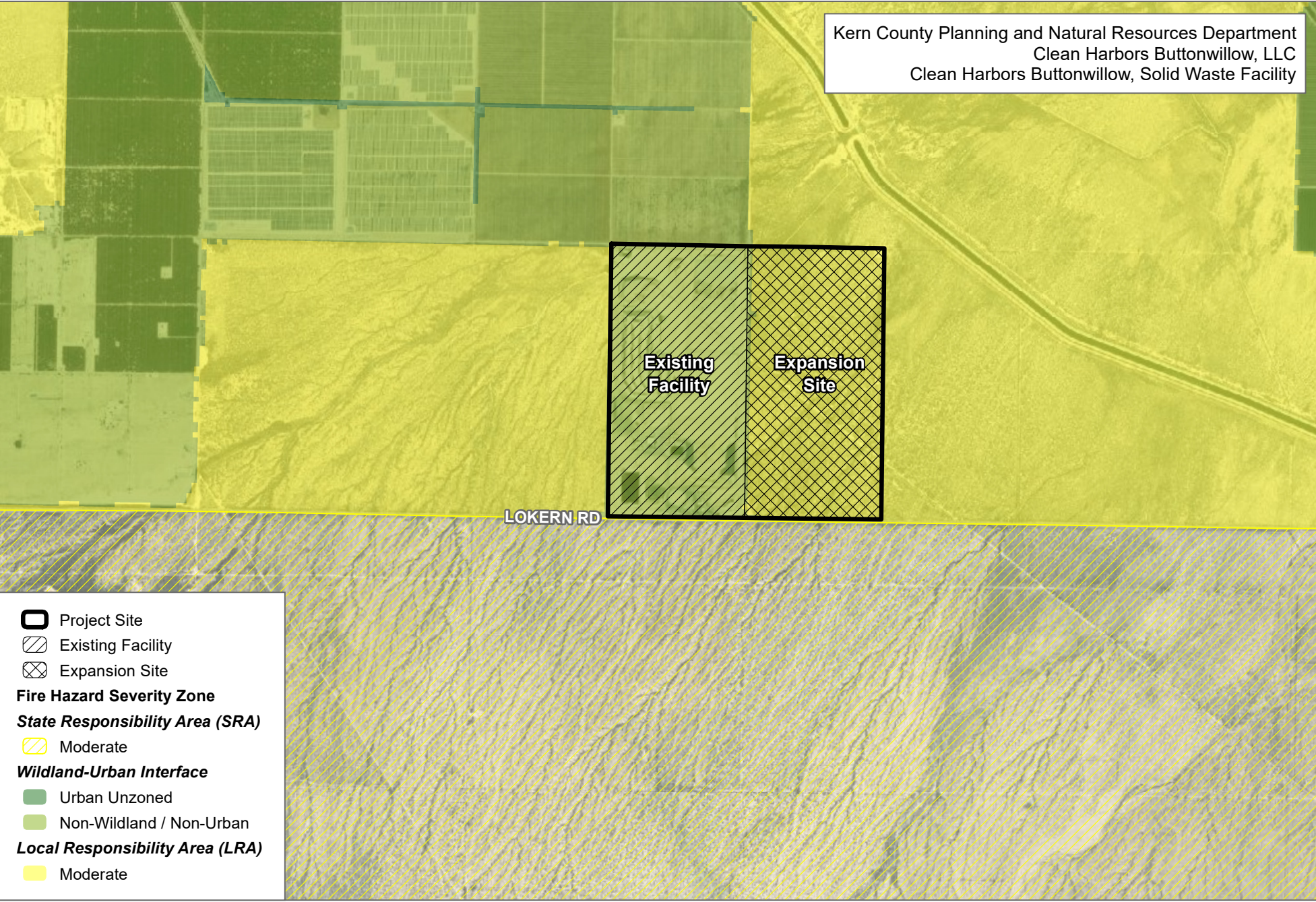
Public Resources Code 4291–4299

California Public Resources Code Section 4291-4299 et seq. requires that brush, flammable vegetation, or combustible growth within 100 feet of buildings be maintained. Vegetation that is more than 30 feet from the building, less than 18 inches high, and important for soil stability, may be maintained; as may single specimens of trees or other vegetation that is maintained so as to manage fuels and not form a means of

rapid fire transmission from other nearby vegetation to a structure. Additionally, the Public Resources Code outlines infraction fees, certification, and compliance procedures applicable with state and local building standards, including those described in subdivision (b) of Section 51189 of the Government Code.

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Kern County Planning and Natural Resources Department
 Clean Harbors Buttonwillow, LLC
 Clean Harbors Buttonwillow, Solid Waste Facility



- Project Site
- Existing Facility
- Expansion Site
- Fire Hazard Severity Zone**
- State Responsibility Area (SRA)**
- Moderate
- Wildland-Urban Interface**
- Urban Unzoned
- Non-Wildland / Non-Urban
- Local Responsibility Area (LRA)**
- Moderate

SOURCE: NAIP 2016, CALFIRE 2020

2022



FIGURE 4.18-1

Fire Hazard Severity Zones - Local and State Responsibility Areas

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Local

Kern County General Plan

Chapter 4: Safety Element

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 Measure

Measure A: Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

Kern County Fire Department Wildland Fire Management Plan

The KCFD Wildland Fire Management Plan adopted in 2009 assesses the wildland fire situation throughout the SRA within the County. The Plan includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire problem. The plan systematically assesses the existing levels of wildland protection services and identifies high-risk and high-value areas, which are potential locations for costly and damaging wildfires. The plan also ranks the areas in terms of priority needs and prescribes what can be done to reduce future costs and losses. The project site is located within a moderate fire hazard severity zone.

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 Fire Department Unit Strategic Fire Plan

The KCFD Unit Strategic Fire Plan, adopted in March of 2018 is the most current document that assesses the wildland fire situation throughout the SRA within the County. Similar to other plans, this document includes stakeholder contributions and priorities, and identifies strategic targets for pre-fire solutions as defined by the people who live and work within the local fire problem. The plan provides for a comprehensive analysis of fire hazards, assets at risk, and level of services to systematically assess the existing levels of wildland protection services and identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires. Additionally, the plan provides an annual report of unit accomplishments, which, in 2017, included completion of a number of fuel reduction projects, hosted three wildfire safety expos in battalions 1,5, and 7, and the award of three SRA fuel reduction grants for a total of \$500,000. The plan gives an overview of KCFD Battalions and ranks these areas in terms of priority needs as well as identifies the areas of SRA. According to the plan, 69 percent of Kern County areas are within a SRA. The County is broken up into six different fuel management areas, Tehachapi, Western Kern, Northern Kern, Mt. Pinos Communities, Kern River Valley, and Valley. The project site is located within Battalion 1 (Tehachapi) which is within a moderate fire hazard severity zone within the Tehachapi fire plan management area.

Fire Prevention Standard No. 503-507 Solar Panels

The Kern County Fire Department Fire Prevention Division adopted Standard No. 503-507 Solar Panels (Ground Mounted, Commercial & Residential) on March 27, 2019. The standard is implemented in accordance with the 2016 CFC and Kern County Ordinance and is an official interpretation of the Kern County Fire Marshal's Office. The standard outlines installation requirements for photovoltaic ground-mounted and roof-mounted solar panels. The proposed project would mount systems for the modules on steel support posts that would be pile driven into the ground and would therefore comply with the ground mounted requirements of this fire prevention standard. Ground mounted solar panel requirements of this standard include water supply, clearance and combustibles, stationary storage battery/energy storage systems, clean agent system permits, fire extinguisher placement, and emergency vehicle access.

4.18.4 Impacts and Mitigation Measures

Methodology

Wildfire impacts are considered on the basis of: 1) offsite wildland fires that could result due to the proposed project, and 2) onsite generated combustion that could affect surrounding areas. The proposed project's potential impacts associated with wildfires have been evaluated using a variety of resources, including CAL FIRE maps showing FHSZs, FRAP, and fire history, vegetation data from the Biological Technical Report (Appendix D), project location maps, and project characteristics. Using the aforementioned resources and professional judgment, impacts were analyzed according to CEQA significance criteria described below.

Hazardous and Non-Hazardous Project Components

The proposed project includes both hazardous and non-hazardous waste components, as described in Chapter 3, *Project Description*.

The potential County land use entitlements would facilitate the continued and expanded permitted non-hazardous solid waste disposal at the existing Clean Harbors Buttonwillow Facility. Physical changes to the existing environment would include the construction and operation of three additional Class II non-hazardous waste landfill units (WMUs 36, 37, 38) increasing the permitted waste disposal capacity for additional non-hazardous waste, an increase of permitted incoming daily maximum non-hazardous waste tonnage limit, expansion of the existing Facility area to include the 320-acre parcel immediately east of the existing waste Facility to provide an area for a landfill borrow soil storage, and construction and operation of a latex paint recycling building.

The potential DTSC renewal of the Hazardous Waste Facility permit would not provide for an increase in the existing hazardous waste capacity. The scope of the proposed permit includes renewal authorization for existing facilities and operations, with the following modifications: Classification of the existing four Stabilization Treatment Unit (STU) tanks as miscellaneous units, approval of four new Tank Treatment Buildings (TTB) where hazardous-waste treatment will be conducted, approval of four new Drum Storage Buildings (DSB) to support TTBs operation, and the addition of environmental monitoring programs consistent with current regulatory standards. Physical changes to the existing environment would be limited to the construction and operation of the four new TTBs and DSBs. Renewal of the Hazardous Waste Facility permit is expected to maintain compliance with the current conditions of compliance contained within Conditional Use Permit No. 4, Map No. 97 (included as Appendix L) for the existing hazardous waste portion of the facility, as well as DTSC current and revised permit requirements (Appendix M and Appendix N).

Thresholds of Significance

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

A project would have a significant impact with respect to wildfires if it would be located in or near state responsibility areas or lands classified as very high fire hazard severity zones, and if the project would:

- a. Substantially impair an adopted emergency response plan or emergency evacuation plan;
- b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;
- d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes.

Project Impacts

Impact 4.18-1: The project would not substantially impair an adopted emergency response plan or emergency evacuation plan.

The project site is not classified as being within a high fire hazard severity zone and is not anticipated to physically impede the existing emergency response plans, emergency vehicle access, or personnel access to the site. The site is located in a rural, sparsely developed area with limited population. The project site is not located along an identified emergency evacuation route and is not identified in any adopted emergency evacuation plan. Also, in compliance with applicable Fire Code and Building Code requirements, construction managers and personnel would be trained in fire prevention and emergency response. Fire suppression equipment specific to construction would be maintained on site. Additionally, project construction would comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Therefore, the project would not conflict with the implementation of, or physical interference with, an adopted emergency response plan or emergency evacuation plan and impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.18-2: 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.

Slope and wind speed can influence the spread of fires. Upslope topography eventually increases the spread rate of the fire in all fuel beds over flat conditions. As described in Chapter 3, Project Description, elevations across the project site range from approximately 335 feet above mean sea level (msl) in the northeast portion of the site to approximately 415 feet above msl in the southwest portion of the site; thus, the site's topography has a gentle slope to the southwest. The project would not introduce any permanent occupants that could be exposed to pollutant concentrations from wildfire, nor permanently increase the number of full-time employees. Furthermore, the project site is classified as unzoned areas in LRA and SRA and is outside of areas identified by CAL FIRE as having substantial or very high risk. Thus, the potential for wildfire on the project site is considered low. Additionally, project construction would comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Given the moderate potential for fire and the lack of permanent occupants, the project is not anticipated to expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire due to slope, prevailing winds and other factors. Impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance

Impacts would be less than significant.

Impact 4.18-3: The project would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

As described in Chapter 3, *Project Description*, of this EIR, this project contains two components: Expansion of the non-hazardous waste disposal Facility and renewal of the hazardous waste Facility permit. Non-hazardous WMU 36 will be constructed in two stages and filled sequentially. The liner and LCRS systems of non-hazardous WMUs 37 and 38 will each be constructed in one phase. Construction will include excavation, placement and compaction of engineered fill and prepared subgrade, placement of drainage aggregate and operations layer material, installation of piping, lighting, and installation of temporary erosion control features. Construction is expected to begin within a year of receiving all the necessary permits and approvals for construction and take an estimated seven months. A total of approximately 2.01 MCY of cut and approximately 61,000 CY of fill is required to develop the landfill units. The soils excavated from the new non-hazardous landfills will be used for landfill construction and operations, cover soil, or stockpiled. Location of the proposed stockpile areas are within the proposed landfill buffer area as shown on **Figure 3-9, Future Facilities**. The estimated volumes of the proposed stockpiles are shown in the project description, **Table 3-5, Proposed Stockpile Capacities**. As noted above, stockpiled soils will be used for intermediate cover, if needed during construction, and for final cover for the new non-hazardous landfills at completion of construction. No additional lighting will be installed in the stockpile areas. The proposed project would not require the installation of new access roads.

Most fires in the desert are caused by lightning or vehicles. The installation of the new hazardous waste treatment buildings would not be placed within a high fire hazard zone, and the vegetation would be cleared; therefore, the proposed project would not result in increased fire risks that could result in temporary or ongoing impacts to the environment. Additionally, as discussed in Section 4.14, *Public Services*, the project proponent/operator shall develop and implement a Fire Safety Plan that contains notification procedures and emergency fire precautions consistent with the 2022 California Fire Code and Kern County Fire Code for use during construction, operation and decommissioning, per implementation of Mitigation Measure 4.14-1. Implementation of this plan would ensure that potential impacts related to installation or maintenance of associated infrastructure is reduced and, thus, impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.14-1.

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.14-1, impacts will be less than significant.

Impact 4.18-4: The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes.

Development of the proposed project would alter existing on-site drainage patterns and flowpaths compared to existing conditions and include the introduction of new impervious surfaces. However, as discussed in Section 4.10, *Hydrology and Water Quality*, the changes in drainage would not be significant. The project would require implementation of a Stormwater Pollution Prevention Plan (SWPPP), which would include erosion and sediment control BMPs during construction, thereby reducing the potential of erosion and siltation during construction and would control potential flooding events that could occur during construction.

While the project would introduce some new structures to the project site, the structures would not be placed in a highly flammable landscape. Therefore, the project would not 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. Impacts would be less than significant.

Mitigation Measures

No mitigation measures required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Setting, Impacts, and Mitigation Measures

As shown in Chapter 3, *Project Description*, Table 3-7, *Cumulative Projects List for Kern County*, there are 6 projects proposed or approved throughout the San Joaquin Valley in Kern County. The geographic scope for wildfire impacts is considered the. These projects are all located within the Antelope Plain on the southwestern flank of the San Joaquin Valley. The land within the region possesses relatively similar uses, including sparse desert vegetation, rural access roads, irrigated agricultural lands, scattered rural residences, producing and non-producing water wells, cattle ranching and maintenance facilities, mining, wind and solar energy uses.

The cumulative projects are primarily infrastructure and resource projects that would not introduce permanent residents or greatly increase the employee population with the cumulative geographic area. With implementation of normal precautions and compliance with the building code, these projects are not anticipated to result in a cumulative impact related to effects of wildfire.

Mitigation Measures

Implement Mitigation Measure MM 4.14-1

Level of Significance after Mitigation

With implementation of Mitigation Measure MM 4.14-1, cumulative impacts would be less than significant.

5.1 Environmental Effects Found To Be Less than Significant

California Environmental Quality Act (CEQA) *Guidelines* Section 15128 requires that an EIR “contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR.”

Kern County has engaged the public in the scoping of this Environmental Impact Report (EIR). Comments received during scoping have been considered in the process of identifying issue areas that should receive attention in the EIR. The EIR’s contents were established based on the Notice of Preparation/Initial Study (NOP/IS), included in Appendix A of this EIR, that was prepared in accordance with the State CEQA *Guidelines* and in consideration of public and agency input received during the scoping process.

Issues that were found to have no impact or less-than-significant impacts do not need to be addressed further in this EIR. Based on the findings of the NOP/IS and the results of scoping, it was determined that the project would have no impact with regard to the following impact thresholds:

- Recreation and;
- Population and Housing.

The NOP/IS determined the project does not include new recreational facilities and would not appreciably increase demands on existing facilities. The temporary increase in use of recreation facilities during construction that might be caused by an influx of workers would be minimal. The project would require employees for operation and maintenance activities but would likely be drawn from the local labor force and would commute from their existing permanent residences to the project site during those times. However, even if the full-time employees were hired from out of the area and relocated to eastern Kern County, the resulting addition of families to this area would not result in a substantial increase in the number of users at local parks. As a result, there would not be a detectable increase in the use of parks or other recreational facilities.

The NOP/IS determined that the project may result in a slight increase in employment opportunities in the area, however, these opportunities would not induce substantial population growth beyond County projections, alter the location, distribution, density or growth rate of the population beyond that projected in the KCGP Housing Element, result in a substantial increase in demand for additional housing, or create a development that significantly reduces the ability of the County to meet housing objectives set forth in the KCGP Housing Element. The proposed project would also not displace any existing housing such that it would necessitate the construction of replacement housing elsewhere. As a result, there would not be any impacts associated with substantial population growth.

For all other resource areas, this EIR contains a comprehensive analysis of potential environmental impacts. After further study and environmental review, as provided in this EIR, it was determined that project-level

impacts in the following areas would be less than significant or could be reduced to less-than-significant levels with mitigation measures; however, these resource areas are evaluated in this EIR for their potential significance:

- Aesthetics
- 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
- Agricultural Resources
- Noise
- Public Services
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

5.2 Significant Environmental Effects that Cannot Be Avoided

State 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, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR.

After further study and environmental review, as provided in this EIR, it was determined that project-level and cumulative impacts in the following areas would be significant and unavoidable for the project, even with the incorporation of reasonable mitigation measures, which would attempt to reduce impacts to the greatest extent feasible.

As shown in **Table 5-1, Summary of Significant and Unavoidable Impacts of the Project**, impacts in the following areas would be significant and unavoidable, even with the incorporation of feasible mitigation measures that attempt to reduce impacts to the extent feasible.

TABLE 5-1: SUMMARY OF SIGNIFICANT AND UNAVOIDABLE IMPACTS OF THE PROJECT

Project Impacts	Cumulative Impacts
Air Quality	
Project operations would result in significant emissions of ozone precursors, VOC and NO _x . Even with implementation of Mitigation Measures MM 4.3-1 (Construction Dust Control), MM 4.3-2 (Tier 4 Construction equipment), and MM 4.3-3 (Voluntary Emissions Reduction Agreement), operational VOC and NO _x emissions criteria air pollutants would result in significant and unavoidable project-level impacts.	The project area is in non-attainment for ozone. Therefore a significant impact related to VOC and NO _x would be considered a cumulative impact. As such, cumulative impacts for criteria pollutants would be considered significant and unavoidable .

5.3 Irreversible Impacts

State CEQA Guidelines Section 15126.2(c) 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.

Build-out of the project would commit nonrenewable resources during project construction. During project operations, oil, gas, and other fossil fuels and nonrenewable resources would be consumed, primarily in the form of transportation fuel for project employees. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of long-term project operations. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the Kern County General Plan, as a matter of public policy, those commitments have been determined to be acceptable. The Kern County General Plan ensures that any irreversible environmental changes associated with those commitments will be minimized.

5.4 Growth Inducement

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

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

As described in Chapter 3, *Project Description*, the project proposes 1) construction and operation of a non-hazardous waste landfill expansion to provide area for borrow landfill pit soil to be stored on a new 320-acre parcel site to the east of the existing waste facility area; 2) renew the existing hazardous waste facility permit, and build four (4) new hazardous waste buildings to encapsulate hazardous waste that is currently being processed at the existing site. Kern County is also incorporating into the EIR analysis of Clean Harbors’ existing hazardous waste operations, with requested modifications described in the Hazardous Waste Facility Permit renewal application which is under review by the Department of Toxic Substances Control (DTSC), a Responsible Agency for this project. The proposed facilities would operate 24 hours a day, 365 days per year. Currently, the Clean Harbors Buttonwillow employs 30 full-time employees for the landfill facility. The project would provide new employment consistent with the adopted *Kern County General Plan* goals, plans, and policies. It is anticipated that approximately 8 to 65 temporary workers would be needed to complete the construction of the project over one year. It is expected that the construction workforce would commute to the site from various local communities and the number of workers expected to relocate to the surrounding area is not expected to be substantial. Thus, the project would have minimal, if any, growth-inducing impacts associated directly or indirectly with population increase in the area.

The proposed project would expand the available solid waste disposal capacity within the County. As discussed in Section 4.17, *Utilities and Service Systems*, the development of the non-hazardous WMUs would provide approximately 16 years of additional landfill capacity, while preserving the Class I hazardous land fill capacity in the County. As the County currently has numerous landfill and waste transfer

facilities, including the existing project, growth in the county is not currently inhibited by a lack of solid waste facilities. Therefore, the expansion of the proposed facility does not represent the removal of an infrastructure barrier to additional growth in the County.

The project would therefore not result in significant or unplanned growth within the County.

6.1 Introduction

The California Environmental Quality Act (CEQA) requires that an EIR describe a range of reasonable alternatives to the project or to the location of the project that could feasibly avoid or lessen any significant environmental impacts of the project while attaining most of the project’s basic objectives. An EIR also must compare and evaluate the environmental effects and comparative merits of the alternatives. This chapter describes alternatives considered but eliminated from further consideration (including the reasons for elimination), and compares the environmental impacts of several alternatives retained with those of the project.

The following are key provisions of the CEQA *Guidelines* (Section 15126.6):

- The discussion of alternatives shall focus on alternatives to the project or its site that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede, to some degree, the attainment of the project objectives, or would be more costly.
- The No Project Alternative shall be evaluated, along with its impacts. The no-project analysis shall discuss the existing conditions at the time the notice of preparation was published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.
- The range of alternatives required in an EIR is governed by a “rule of reason.” Therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
- 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 that fosters 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 CEQA *Guidelines* Section 15126.6(f)(1)) are environmental impacts, site suitability, economic viability, social and political acceptability, technological capacity, availability of infrastructure, General Plan consistency, regulatory limitations, jurisdictional boundaries, and whether the project proponent could reasonably acquire, control, or otherwise have access to an alternative site. If an alternative has effects that cannot be reasonably identified, if its implementation is remote or speculative, and if it would not achieve the basic project objectives, it need not be considered in the EIR.

6.1.1 Significant Impacts of the Project

The project has the potential to result in significant impacts to the environment. The alternatives analysis should focus on alternatives to the project or its site that are capable of avoiding or substantially lessening one or more significant effects of the project.

As discussed in Chapter 4, the following impacts are potentially significant, but would be reduced to a less-than-significant level with the implementation of feasible mitigation:

- Biological resources
- Cultural Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Mineral Resources
- Noise
- Public Services
- Transportation
- Wildfire

As discussed in Chapter 4, the following impact would remain significant and unavoidable, despite the implementation of all feasible mitigation measures:

- Air Quality

6.2 Project Objectives

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects (CEQA *Guidelines*, Section 15126.6[c]). As described in Chapter 3, *Project Description*, of this EIR the following objectives have been established for the project and will aid decision makers in the review of the proposed project and associated environmental impacts.

Non-Hazardous Waste Objectives

- Modify existing CUP to include new non-hazardous solid waste landfills and stock piles of borrow dirt within modified permitted facility boundary, to decrease the placement of non-hazardous materials into hazardous material landfills, thus preserving the life of the hazardous waste landfills;
- Construct one new paint recycling building at the original facility;
- To provide clarity of definitions and expanded activities allowed under the CUP;
- To expand the daily non-hazardous vehicle tonnage limit to support current and future operations;
- To continue to provide economic benefits to Kern County through employment of local residents, via expansion of operational activities and construction of new processing equipment, which has the potential to create new job opportunities;
- To continue to comply with San Joaquin Valley Air Pollution Control District's rules and regulation and changes with those regulations in the future;
- Change zoning of proposed project site to facilitate construction of a paint recycling facility;
- To increase non-hazardous waste tonnage for processing through the addition of three new non-hazardous waste landfill units.

Hazardous Waste Objectives

- To make a determination on the Application for a Hazardous Waste Facility Permit submitted to the DTSC.
- Construct four new hazardous waste tank treatment buildings and drum storage buildings at the Facility thereby allowing required hazardous waste treatment operations to be conducted in state-of-the-art facilities that provide a greater level of protection to human health and the environment.

6.3 Overview of the Proposed Project

Clean Harbors Buttonwillow (project proponent) proposes to: 1) construct and operate a non-hazardous waste landfill expansion to provide area for borrow landfill pit soil to be stored on a new 320-acre parcel site to the east of the existing waste facility area; 2) renew the existing hazardous waste facility permit, and build four (4) new hazardous waste buildings to encapsulate hazardous waste that is currently being processed at the existing site. Kern County is also incorporating into the EIR analysis of Clean Harbors' existing hazardous waste operations, with requested modifications described in the Hazardous Waste Facility Permit renewal application which is under review by the Department of Toxic Substances Control (DTSC), a Responsible Agency for this project.

The proponent is proposing an increase in the non-hazardous waste processing landfill pits on-site so that non-hazardous waste will not be placed in with hazardous waste landfill pits, thus reserving capacity in the hazardous waste disposal areas for additional years. A new paint recycling building will also be added to the current project site to recycle latex paints, assisting both the State and Clean Harbors Buttonwillow in increasing recycling as mandated by California State Law. The facility was granted a Hazardous Waste Facility Permit by DTSC and the U.S. Environmental Protection Agency (EPA) in May 1983 and October 1984, respectively. The Hazardous Waste Facility Permit was renewed in 1996. On April 6, 2006, the DTSC Hazardous Waste Facility Permit expired but is continued in accordance with regulatory requirements. Clean Harbors Buttonwillow, LLC has submitted a Hazardous Waste Facility Permit renewal application to DTSC. DTSC is currently performing a technical review and will also use the EIR, if approved by the Board of Supervisors, to inform their technical review.

The proposed project includes Kern County's modification of existing land use authorizations to include an expanded permitted disposal area to facilitate the construction and operation of additional non-hazardous waste landfill units and an expanded permitted facility area to accommodate a soil stockpiles area; an increase to permitted disposal capacity for additional non-hazardous waste; the construction and operation of four new hazardous waste tank treatment buildings; and construction and operation of a latex paint recycling building. In addition, the project proponent has submitted a renewal application to the Department of Toxic Substance Control (DTSC) for the existing hazardous waste permit.

6.4 Overview of Alternatives to the Project

Under CEQA, and as indicated in California Public Resources Code (PRC) Section 21002.1(a), the identification and analysis of alternatives to a project is a fundamental aspect of the environmental review process and is required to ensure the consideration of ways to mitigate or avoid the significant environmental effects of a project. Based on the significant environmental impacts of the proposed project, the aforementioned objectives established for the proposed project, and the feasibility of the alternatives

considered, four alternatives, including the No Project Alternative as required by CEQA, are considered in this chapter and summarized in **Table 6-1, Summary of Development Alternatives**. The Environmentally Superior Alternative, as required by CEQA, is described in Section 6.8, *Environmentally Superior Alternative*, below.

6.4.1 Alternative 1: No Project Alternative

The CEQA *Guidelines* require EIRs to include a No Project Alternative for the purpose of allowing decision makers to compare the effects of approving the proposed project versus not approving the project. For the proposed project, two separate approvals are required, which would affect the project site. Therefore, Alternative 1, No Project Alternative, assumes that neither the County nor DTSC takes an action to approve the proposed project. Other scenarios, where only one agency with jurisdiction over the project takes action, are discussed below.

Under the No Project Alternative, the County would not approve the proposed non-hazardous expansion of the waste disposal facility and DTSC would not approve the renewal of the hazardous waste facility. Therefore, the site would cease to receive waste (neither hazardous nor non-hazardous) and the closure plan and post-closure maintenance plan would be implemented. The proposed post-closure use of the existing facility is unirrigated open space.

6.4.2 Alternative 2: No Expansion Alternative

Alternative 2, the No Expansion Alternative, would not include the proposed expansion of non-hazardous waste disposal in the amount of 4,050 tons per day. This alternative assumes that the relicensing of the existing hazardous waste facility would be approved, at the current amount of 4,050 tons per day. This alternative represents continued operation of the facility as it currently exists. A combination of hazardous and non-hazardous waste would continue to be received. The 320-acre expansion site located to the east of the existing facility would not be acquired. The estimated closure date of the existing facility is 2040, which would remain unchanged under this Alternative.

6.4.3 Alternative 3: Expanded Non-Hazardous Facility

Under Alternative 3, the Expanded Non-Hazardous Facility, the hazardous waste facility would not be relicensed by DTSC, but the County would permit both the existing facility to operate as a non-hazardous facility, and would permit the additional 4,050 tons per day, for a total of 8,100 tons per day of non-hazardous disposal. The 320-acre expansion site would be acquired, similar to the proposed project. Relocation and construction of new on-site facilities would occur, similar to the proposed project, but facilities for handling hazardous wastes, including the paint recycling facility and the four tank treatment buildings (TBBs) would not be constructed.

6.4.4 Alternative 4: Non-Hazardous Facility (No Expansion)

Under Alternative 4, the Non-Hazardous Facility (No Expansion), the hazardous waste facility would not be relicensed, and the county would permit the existing facility to operate as a non-hazardous waste facility. No expansion (of either the site boundary or daily tonnage) would be permitted. The facility currently receives both hazardous and non-hazardous material, and this alternative would eliminate the hazardous

waste stream, but allow 4,050 tons per day of non-hazardous waste. Closure would be anticipated in 2040, per the current estimates for the existing facility.

Table 6-1, *Summary of Development Alternatives*, provides a summary of the relative impacts and feasibility of each alternative. A complete discussion of each alternative is also provided below.

TABLE 6-1: SUMMARY OF DEVELOPMENT ALTERNATIVES

Alternative	Description	Basis for Selection and Summary of Analysis
Project	<ul style="list-style-type: none"> • Increased non-hazardous waste facility capacity • Renewal of Hazardous Waste Permit • Construction of new hazardous waste treatment facilities 	N/A
Alternative 1: No Project Alternative	<ul style="list-style-type: none"> • The County would not approve the non-hazardous expansion. • DTSC would not approve the renewal of the Hazardous Waste Permit. The facility would cease to operate. 	<ul style="list-style-type: none"> • No project (no action) as required by CEQA • Avoids all direct significant impacts • May result in indirect impacts as hazardous wastes are diverted to other Class I facilities in the region. • Does not meet any of the project objectives
Alternative 2: No Expansion Alternative	<ul style="list-style-type: none"> • The County would not approve the non-hazardous expansion. • DTSC would approve the renewal of the Hazardous Waste Permit. 	<ul style="list-style-type: none"> • Avoids need for CUPs and GPA • Avoids significant and unavoidable air quality impact. • Reduces (but does not avoid) impacts to biological resources, and tribal cultural resources • Does not meet all key project objectives
Alternative 3: Expanded Non-Hazardous Facility Alternative	<ul style="list-style-type: none"> • DTSC would not approve the renewal of the Hazardous Waste Permit. • County would approve the expansion and allow existing operation to continue as a non-hazardous facility at 8,100 tons per day 	<ul style="list-style-type: none"> • Similar to proposed project. • Does not meet all key project objectives
Alternative 4: Non-Hazardous Facility (No Expansion) Alternative	<ul style="list-style-type: none"> • DTSC would not approve renewal of the Hazardous Waste Permit • The County would approve the facility to operate as a non-hazardous facility at current levels of 4,500 tons per day. 	<ul style="list-style-type: none"> • Avoid significant and unavoidable air quality impact • Greater impacts to GHG emissions land use and planning, and noise • Reduces (but does not avoid) impacts to biological resources, and tribal cultural resources • Does not meet all key project objectives

6.5 Alternatives Considered and Rejected

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially reduce any significant environmental effects (CEQA *Guidelines*, Section 15126.6[c]). Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered (CEQA *Guidelines*, Section 15126[f][2]). Per CEQA, the lead agency may make an initial determination as to which alternatives are feasible and warrant further consideration, and which are infeasible. The following alternatives were initially considered but were eliminated from further consideration in this EIR because they do not meet project objectives or were infeasible.

- Off-site Alternative

6.5.1 Alternative Site

This alternative would involve the development of the proposed project on another site located within Kern County. Although undetermined at this time, the alternative project site would likely be located in the western region of the County, near the oil and gas industry and near established haul routes, including Interstate 5 and Highway 58. This alternative is assumed to involve construction of a Class I landfill with a daily capacity of 8,100 tons and would require at least 320 acres. CEQA *Guidelines* 15126.6(f)(2)(a) states that the key and initial step in considering an alternative site is whether “any of the significant effects of the project would be avoided or substantially lessened” in relocating the project, while remaining consistent with the same basic objectives of the proposed project.

As the alternative location would not be able to rely on the existing facilities, overall construction would be greater, and the “footprint” impacts of the project would be increased. These include biological resources, and cultural resources. Impacts related to lighting (aesthetics), geology, and hazards would be similar to the proposed project. Depending on the location, impacts related to hydrology, utilities, and wildfire could be increased. Impacts related to air quality, which are significant and unavoidable for the proposed project, due to increased mobile emissions, would not be avoided by an off-site alternative.

In addition, it is the County’s policy to maximize the use of existing facilities rather than to locate new facilities. For these reasons, an alternative site is not considered to be “potentially feasible.” Therefore, this alternative was considered but eliminated because it would not avoid or substantially reduce the significant environmental effects of the proposed project.

6.6 Analysis Format

In accordance with CEQA *Guidelines* Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the project. Furthermore, each alternative is evaluated to determine whether the project objectives identified in Chapter 3, *Project Description*, of this EIR would be mostly attained by the alternative. The project’s impacts that form the basis of comparison in the alternatives analysis are those

impacts which represent a conservative assessment of project impacts. The evaluation of each of the alternatives follows the process described below.

- a) The net environmental impacts of the alternative after implementation of reasonable mitigation measures are determined for each environmental issue area analyzed in this EIR.
- b) Post-mitigation significant and less than significant environmental impacts of the alternative and the project are compared for each environmental issue area as follows:
 - Less: Where the impact of the alternative after feasible mitigation would be clearly less adverse than the impact of the project, the comparative impact is said to be “less.”
 - Greater: Where the impact of the alternative after feasible mitigation would be clearly more adverse than the impact of the project, the comparative impact is said to be “greater.”
 - Similar: Where the impacts of the alternative after feasible mitigation and the project would be roughly equivalent, the comparative impact is said to be “similar.”
- c) The comparative analysis of the impacts is followed by a general discussion of whether the underlying purpose for the project, as well as the project’s basic objectives would be substantially attained by the alternative.

Table 6-2, *Comparison of Alternatives*, provides a summary and side-by-side comparison of the proposed project with the impacts of each of the alternatives analyzed. Please note that in Alternatives 1 through 4 in Table 6-2, the references to “less, similar, or greater,” refer to the impact of the alternative compared to the proposed project, and the impacts “no impact (NI), less than significant (LTS), or significant and unavoidable (SU),” in the parentheses refer to the significant impact of the specific alternative.

TABLE 6-2: COMPARISON OF ALTERNATIVES

Environmental Resource	Proposed Project	Alternative 1: No Project	Alternative 2: No Expansion	Alternative 3: Expanded Non-Hazardous Facility	Alternative 4: Non-Hazardous Facility (No Expansion)
Aesthetics	Less than Significant with Mitigation (light and glare)	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Agricultural and Forestry Resources	Less than Significant	Similar (LTS)	Similar (LTS)	Similar (LTS)	Less (LTS)
Air Quality	Significant and Unavoidable (ozone precursors, cumulative)	Less (LTS)	Less (LTS)	Similar (SU)	Less (LTS)
Biological Resources	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Cultural Resources	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Energy	Less than Significant	Less (LTS)	Less (LTS)	Similar (LTS)	Less (LTS)
Geology and Soils	Less than Significant with Mitigation	Less (LTS)	Less (LTS)	Similar (LTS)	Less (LTS)
Greenhouse Gas Emissions	Less than Significant	Similar (LTS)	Less (LTS)	Similar (LTS)	Less (LTS)
Hazards and Hazardous Materials	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Hydrology and Water Quality	Less than Significant	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Land Use and Planning	Less than Significant	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Noise	Less than Significant with Mitigation	Less (LTS)	Less (LTS)	Similar (LTS)	Less (LTS)
Public Services	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Transportation	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Tribal Cultural Resources	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)

TABLE 6-2: COMPARISON OF ALTERNATIVES

Environmental Resource	Proposed Project	Alternative 1: No Project	Alternative 2: No Expansion	Alternative 3: Expanded Non-Hazardous Facility	Alternative 4: Non-Hazardous Facility (No Expansion)
Utilities and Service Systems	Less than Significant	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Wildfires	Less than Significant with Mitigation	Less (NI)	Less (LTS)	Similar (LTS)	Less (LTS)
Meet Project Objectives?	All	None	Partially	Partially	Partially
Reduce Significant and Unavoidable Impacts?	N/A	Yes	Yes	No	Yes

NI = No Impact

LTS = Less than Significant

SU = Significant and Unavoidable

6.7 Impact Analysis

6.7.1 Alternative 1: No Project Alternative

Environmental Impact Analysis

Aesthetics

Under the No Project Alternative, no development would take place on the project site and the facility would close. The existing facilities would be removed. No additional lighting would be developed, resulting in no visual impacts.

Agricultural and Forestry Resources

The project site does not contain agricultural or forestry resources. The No Project Alternative would result in similar impacts compared to the proposed project.

Air Quality

Under the No Project Alternative, no development would take place on the project site and the facility would close. No exceedance of the EKAPCD's thresholds for NO_x or PM₁₀ would occur, no confliction or daily with the attainment of the standard, nor would the No Project Alternative contribute to a cumulative net increase of criteria pollutant in the projects' region. Some construction activity would be required to close the existing facility, resulting in some emissions. Impacts to air quality would be less than the proposed project.

Biological Resources

Under the No Project Alternative, no development would take place on the project site and the facility would close. The expansion site would not be disturbed, new WMUs would not be constructed, and impacts to biological resources would be avoided. The post-closure use of the project site is unirrigated open space, which may provide habitat for certain species.

Cultural Resources

Under the No Project Alternative, no development would take place on the project site and the facility would close. The expansion site would not be disturbed, new WMUs would not be constructed, and potential impacts to undiscovered resources would be avoided.

Energy

Under the No Project Alternative, no development would take place on the project site and the facility would close. No energy consumption, other than that required for closure of the site. However, the need to dispose of solid waste would continue, potentially resulting in similar energy impacts elsewhere in the County or region.

Geology and Soils

Under the No Project Alternative, no development would take place on the project site and the facility would close. Under the No Project Alternative, the expansion site would not be disturbed and no new WMUs developed. Therefore, impacts related to soils and geological conditions would be reduced. Some construction activity would be required to close the facility, so geological impacts may not be completely avoided.

Greenhouse Gas Emissions

Under the No Project Alternative, no development would take place on the project site and the facility would close. Under the No Project Alternative, emissions associated with transport and disposal of waste would not occur on the project site. However, disposal would occur elsewhere. Given the global nature of GHG emissions, overall emissions may not decline relative to the project.

Hazards and Hazardous Materials

Under the No Project Alternative, no development would take place on the project site and the facility would close. Impacts related to the expansion of the facility would be avoided.

Hydrology and Water Quality

Under the No Project Alternative, no development would take place on the project site and the facility would close. Some construction would be required to close the facility, and final post-closure grading of the site would take into account drainage. Overall, hydrology impacts would be reduced compared to the project.

Land Use and Planning

Under the No Project Alternative, no development would take place on the project site and the facility would close. No CUP or General Plan Amendment would be required. No impact would occur.

Noise

Under the No Project Alternative, no development would take place on the project site and the facility would close. Some construction would be required for closure of the facility, which would result in short-term noise similar to the proposed project. However, operational noise, which is less than significant under the proposed project, would be avoided.

Public Services

Under the No Project Alternative, no development would take place on the project site and the facility would close. The need for fire protection and police protection would not be avoided entirely, but would be less than the proposed project. Impacts to schools, parks, or other government facilities would be avoided. Therefore, impacts to public services would be less as compared to the project.

Transportation

Under the No Project Alternative, no development would take place on the project site and the facility would close. Impacts related to access to the expanded facility would be avoided, although short-term

construction would still occur during project closure. Therefore, short term construction impacts would be similar, but long term impacts would be avoided completely. Note that the need to dispose of solid waste elsewhere may result in indirect transportation impacts elsewhere in the County.

Tribal Cultural Resources

Under the No Project Alternative, no development would take place on the project site and the facility would close. Under the No Project Alternative, the expansion site would not be developed and no WMUs constructed. Therefore, there would be no impact and the No Project Alternative would result in less impacts related to tribal cultural resource compared to the proposed project.

Utilities and Service Systems

Under the No Project Alternative, no development would take place on the project site and the facility would close. Following closure, no utilities would be required at the site, which would become non-irrigated open space.

Wildfires

Under the No Project Alternative, no development would take place on the project site and the facility would close. Some wildfire risk may exist during short-term construction for closure. However, operational impacts would be avoided. It should be noted that existing water well would be closed, potentially removing a source of water for fire suppression in the project vicinity.

Comparison of Impacts

The No Project Alternative would avoid the significant and unavoidable air impact associated with the project. This alternative would result in similar or lesser impacts for all other categories of impact.

Relationship to Project Objectives

The No Project Alternative would not achieve any of the project objectives listed above in Section 6.2, *Project Objectives*. Although this alternative would create less environmental impacts overall, the objectives that shape the project would not be realized under this alternative.

6.7.2 Alternative 2: No Expansion Alternative

Environmental Impact Analysis

Aesthetics

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. No additional lighting would be constructed and no aesthetic impacts would occur.

Agriculture and Forestry Resources

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. The project site does not contain agricultural and forestry resources. Similar to the proposed project, impacts would be less than significant.

Air Quality

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. The air quality impacts related to construction and expanded operations, including off-site mobile emissions, would not occur. Air quality impacts would be less than the proposed project.

Biological Resources

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. As construction of the stockpiles and WMUs would not occur, no new biological impacts would occur, and impacts would be less than the proposed project.

Cultural Resources

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. As construction of the stockpiles and WMUs would not occur, no new cultural impacts would occur, and impacts would be less than the proposed project.

Energy

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. No additional energy consumptions would occur, and impacts would be less than the proposed project.

Geology and Soils

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. No construction of stockpiles or new WMUs would occur, avoiding new impacts related to geology and soils. Impacts would be less than the proposed project.

Greenhouse Gas Emissions

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. GHG emissions would continue to occur, but additional emissions related to construction and transport and handling of additional waste would not occur. The impact would be less than the proposed project.

Hazards and Hazardous Materials

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. Additional hazard risks related to increased operations and construction of the expanded facility would not occur. Impacts would be less than the proposed project.

Hydrology and Water Quality

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. No construction of stockpiles or WMUs would occur, so changes to existing hydrology would be less. Impacts to hydrology and water quality would be less than the proposed project.

Land Use and Planning

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. The CUP for expanded operations would not be necessary. The County may still choose to change the General Plan land use and zoning to public facilities, rather than the existing agricultural classification. This, however, would not result in any physical changes to the environment. Impacts would be less than the proposed project.

Noise

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. Current noise levels would be maintained. The temporary increase in noise related to construction of the expanded facility would not occur. Impacts would be less than the proposed project.

Public Services

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. As the facility would not be expanded, no additional demand for public services would be created. Impacts would be less than the proposed project.

Transportation

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. Allowable tonnage and related haul truck trips would not be increased, and the impact would be less than the proposed project.

Tribal Cultural Resources

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. As construction of the stockpiles and WMUs would not occur, no new tribal cultural impacts would occur, and impacts would be less than the proposed project.

Utilities and Service Systems

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. No additional demand for utilities would occur. Impacts would be less than the proposed project.

Wildfires

Under Alternative 2, the expansion would not be approved. The existing facility would operate as it currently does. As facilities would not be expanded, and construction would not occur, no additional wildfire risk would be created. Impacts would be less than the proposed project.

Comparison of Impacts

This alternative represents continuation of the existing baseline, and can be seen as another form of the No Project Alternative. The significant and unavoidable air quality impact would be avoided, and all other potentially significant impacts requiring mitigation measures would be avoided.

Relationship to Project Objectives

This alternative would potentially achieve the hazardous waste objectives, but would achieve none of the non-hazardous waste objectives.

6.7.3 Alternative 3: Expanded Non-Hazardous Facility

Environmental Impact Analysis

Aesthetics

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site.

Due to the expansion of the facility, visual impacts, including lighting would be similar to the proposed project. Impacts would not be avoided or reduced.

Agriculture and Forestry Resources

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site.

The project site, including the expansion site, does not include agricultural or forestry resources. Impacts would be similar to the proposed project.

Air Quality

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site.

Due to the construction of additional facilities, and the expanded daily operations of the facility, air quality impacts would be similar to the proposed project. Impacts related to particulate matter, ozone precursors,

and Valley Fever would not be avoided or reduced. Due to the removal of hazardous materials from the waste stream, the health risk associated with the facility may be reduced relative to the baseline. However, as the proposed project does not result in a significant health risk, this would not represent the avoidance of a significant impact.

Biological Resources

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site. As construction for expansion would occur under this alternative, impacts would not be avoided or reduced.

Cultural Resources

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site. As construction for expansion would occur under this alternative, impacts would not be avoided or reduced.

Energy

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site. As both construction and expansion of daily operations would occur, energy consumption would not change relative to the proposed project, and would remain less than significant.

Geology and Soils

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site. Construction would occur for the new WMUs and the stockpile site, resulting in the same level of impact as the proposed project. No impacts would be avoided or reduced.

Greenhouse Gas Emissions

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site. As construction activities and daily operations would be nearly the same as the proposed project, GHG impacts would remain similar to the proposed project.

Hazards and Hazardous Materials

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site.

Short-term construction impacts and long-term operations would remain the same with regard to hazards. As the facility would no longer accept hazardous waste, the risks related to hazardous materials relative to the existing baseline would be reduced. However, this would not avoid or reduce an impact as compared to the proposed project.

Hydrology and Water Quality

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site. Construction of expanded facilities would occur under this alternative. Impacts to hydrology and water quality would therefore be similar to the proposed project.

Land Use and Planning

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site.

The actions of the County would be similar to the proposed project, although the County, as the LEA would become the primary regulator of the project site, as the facility would not be disposing of hazardous waste, and DTSC would not be providing oversight (although DTSC would continue to be involved in the closure of the existing Class I WMUs). Impacts would be similar to the proposed project.

Noise

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site.

Short-term construction would be similar to the proposed project. Construction is responsible for the project-related noise impact, and therefore noise impacts would be similar to the proposed project. No impacts would be avoided or reduced.

Public Services

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site.

As operations would be expanded under this alternative, public service demand would be similar to the proposed project. No impacts would be avoided or reduced.

Transportation

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site.

Temporary construction traffic and operational haul truck traffic would increase, similar to the proposed project. No impacts would be avoided or reduced.

Tribal Cultural Resources

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site. As construction for expansion would occur under this alternative, impacts would not be avoided or reduced.

Utilities and Service Systems

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site.

As operations would be expanded under this alternative, public utilities demand would be similar to the proposed project. Impacts would remain less than significant.

Wildfires

Under the Expanded Non-Hazardous Facility Alternative, the daily capacity would be increased from 4,050 tons per day to 8,100 tons per day. The additional WMUs would be constructed, and therefore the stockpiles on the expansion site would be constructed. Hazardous materials would no longer be accepted at the site.

As the facilities and daily operations would be expanded under this alternative, the risk to wildfire would remain similar to the proposed project. No impacts would be avoided or reduced.

Comparison of Impacts

This alternative is similar to the proposed project, but assumes that if DTSC does not renew the Hazardous Waste Permit, the County could approve an expanded non-hazardous facility. Notably, the continued operation of the Class I (hazardous waste) WMUs under the proposed project represent a continuation of the existing baseline. It is the non-hazardous expansion, which requires additional WMUs, additional stockpile sites, and results in increased haul truck trips, that is the main driver of the project impacts. Therefore, this alternative is very similar to the proposed project in terms of impacts.

Relationship to Project Objectives

This alternative would achieve the non-hazardous waste objectives, but would achieve none of the hazardous waste objectives.

6.7.4 Alternative 4: Non-Hazardous Facility (No Expansion)

Environmental Impact Analysis

Aesthetics

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. No additional lighting would be constructed, and impacts would be less than the proposed project.

Agriculture and Forest Resources

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. The project site does not include agricultural or forestry resources. Therefore, impacts would be similar to the proposed project.

Air Quality

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. As no additional construction or expansion of operations would occur, air quality impacts would be reduced. The significant and unavoidable impact related to ozone precursors would be avoided.

Biological Resources

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. As construction of the stockpiles and WMUs would not occur, no new biological impacts would occur, and impacts would be less than the proposed project.

Cultural Resources

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. As construction of the stockpiles and WMUs would not occur, no new cultural impacts would occur, and impacts would be less than the proposed project.

Energy

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. As additional construction and expanded operations would not occur, no change in energy demand would occur. Impacts would be less than the proposed project.

Geology and Soils

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. As no construction of new WMUS or stockpiles would occur, impacts to geology and soils would be reduced compared to the proposed project.

Greenhouse Gas Emissions

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. As additional construction and expanded operations would not occur, no change in GHG emissions would occur. Impacts would be less than the proposed project.

Hazards and Hazardous Materials

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. As additional construction and expanded operations would not occur, no additional impacts related to hazards and hazardous materials would occur. Impacts would be less than the proposed project (and perhaps would be reduced relative to the existing baseline, as hazardous materials would no longer be accepted).

Hydrology and Water Quality

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. As no construction of new WMUs or stockpiles would occur, impacts to hydrology and water quality, which are less than significant under the proposed project, would be further reduced.

Land Use and Planning

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. The County would have to approve a CUP to allow the facility to maintain operations as a non-hazardous facility. The County may also elect to change the land use classification of the site from agricultural to public facilities (but without reclassifying the expansion site). The change in land use designation would not represent a physical impact on the environment. Land use impacts would be similar to the proposed project. .

Noise

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. No construction would occur. As short-term construction noise is the only potentially significant project impact (reduced to less than significant with mitigation), noise impacts would be less relative to the proposed project.

Public Services

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. As expanded operations would not occur, no additional demand for public services would occur. Impacts to public services would be less than the proposed project.

Transportation

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. Short-term construction traffic would not occur, and haul truck traffic would not be increased. Therefore, impacts would be less than the proposed project.

Tribal Cultural Resources

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. As construction of the stockpiles and WMUs would not occur, no new tribal cultural impacts would occur, and impacts would be less than the proposed project.

Utilities and Service Systems

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. As expanded operations would not occur, no additional demand for public utilities would occur. This impact, which is less than significant for the proposed project, would be further reduced.

Wildfires

Under the Non-Hazardous Facility (No Expansion) Alternative, the Hazardous Waste Permit would not be renewed, but the County would approve a non-hazardous solid waste facility to operate at the same capacity of the existing facility. As no physical expansion would occur, either of the facility site or daily operations, wildfire risk would be reduced relative to the proposed project.

Comparison of Impacts

This alternative is similar to the No Expansion project, except that the facility would transition to a non-hazardous facility. The facility footprint and daily activity levels would remain the same as the existing baseline.

Relationship to Project Objectives

This alternative would partially achieve some non-hazardous waste objectives, and would not achieve any of the hazardous waste objectives. In addition, the availability of Class I waste facilities in the County would be further reduced.

6.8 Environmentally Superior Alternative

As presented in the comparative analysis above, and as shown in Table 6-2, there are a number of factors in selecting the environmentally superior alternative. An EIR must identify the environmentally superior alternative to the project. Alternative 1, the No Project Alternative, would be environmentally superior to the project on the basis of its minimization or avoidance of physical environmental impacts. However, CEQA *Guidelines* Section 15126.6(e)(2) states:

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

The No Expansion Alternative and the Non-Hazardous (No Expansion) Alternative are very similar in that each maintains the current facility size and operations. The Non-Hazardous Alternative would convert the existing Class I landfill to a non-hazardous facility. Although the proposed project does not increase risk relative to disposal of hazardous materials (as the expansion is related to non-hazardous materials), it may be seen as an environmental benefit to eliminate hazardous materials operations. However, it must be noted that the demand for Class I facilities would not be reduced, and that waste stream would be displaced elsewhere. However, based on the site specific effects, the Non-Hazardous (No Expansion) Alternative can be identified as the Environmentally Superior Alternative.

It is important to note that this alternative does not achieve most of the key project objectives, and may be seen to be in conflict with the County goal of maximizing existing facilities and thereby avoiding the establishment of new waste facilities in the County.

Chapter 7

Response to Comments

This chapter is being reserved for, and will be included with, the Final EIR.

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Chapter 8

Organizations and Persons Consulted

8.1 State of California

CalRecycle

California Department of Fish & Wildlife, Central Region

California Department of Toxic Substances Control

California Department of Transportation, District 6

California Native American Heritage Commission

8.2 Regional and Local

Bridge Water Storage District

Kern County Superintendent of Schools

Kern County Public Health Department

Kern County Public Works Department

San Joaquin Valley Air Pollution Control District

SoCal Gas

Westside Water Authority

8.3 Tribal Governments

San Manuel Band of Mission Indians

Twenty-Nine Palms Band of Mission Indians

8.4 Organizations

Association of Irrigated Residents

California Native Plant Society

Green Action for Health and Environmental Justice

Kern Audubon Society

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9.1 Lead Agency

Kern County Planning and Natural Resources Department

Lorelei H. Oviatt, AICP – Director

Craig M. Murphy – Assistant Director

Katrina A. Slayton – Advanced Planning Division Chief

Terrance Smalls – Supervising Planner

9.2 Responsible Agency

California Department of Toxic Substances Control

Rebecca De Pont

Randy Snapp

9.3 Technical Assistance

Dudek

Brian Grattidge – Project Manager

Kirsten Burrowes – Deputy Project Manager

Adam Giacinto, RPA – Cultural Resources Report Review

Michael Henry, PhD – Biological Resources Report Review

Adam Poll – Air Quality/GHG/Energy Report Review

Matt Naftaly – Water Supply Assessment Review

Jonathan Leech – Noise Analysis Review

Eric Schniewind – Hydrology and Water Quality Analysis

Tulsi Mistry – Analyst

Savannah Rigney – Analyst

Angelica Chiu – Analyst

Ronelle Candia – Analyst

Iulia Roman –Analyst

Emily Seklecki – Analyst

Blankinship & Associates Inc. – Health Risk Assessment Review

Nikki Slade

Alyssa Nagai

Kelly Trunnelle

Chapter 10

Acronyms and Abbreviations

Acronyms and Abbreviations

AAQA	ambient air quality analysis
AB	Assembly Bill
ACC	Advanced Clean Cars program
ACE	Affordable Clean Energy
AEI	annual emissions inventory
AF	acre-foot
AFY	acre-feet per year
ALA	American Lung Association
ALUCP	airport land use compatibility plan
APCD	air pollution control district
APN	Assessor's Parcel Number
AQAP	Air Quality Attainment Plan
AQMD	air quality management district
ASCE	American Society of Civil Engineers
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
ATCM	Airborne Toxic Control Measure
BAU	business-as-usual
BCC	Bird of Conservation Concern
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMP	best management practice
BNLL	blunt-nosed leopard lizard
BPS	Best Performance Standards
BTR	biological technical report
CA	California
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
Cal ARP	California Accidental Release Prevention Program
CAL FIRE	California Department of Forestry and Fire Protection

Acronyms and Abbreviations

CalEEMod	California Emissions Estimator Model
CalGEM	California Geologic Energy Management Division
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CASGEM	California Statewide Groundwater Elevation Monitoring
CAT	Climate Action Team
CBC	California Building Code
CCAA	California Clean Air Act
CCAP	Climate Change Action Plan
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CE	Candidate Endangered
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulation
CGC	California Government Code
CGS	California Geological Survey
CH ₄	methane
CHL	California Historical Landmark
CHP	California Highway Patrol
CI	Coccidioides immitis
CIP	Capital Improvement Plan
CIWMB	California Integrated Waste Management Board
CLOMR	Conditional Letter of Map Revision
CMP	congestion management program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
COG	Council of Governments
COPC	chemicals of potential concern

Acronyms and Abbreviations

CPG	Comprehensive Preparedness Guide
CPUC	California Public Utilities Commission
CREC	controlled recognized environmental condition
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Rank
CRS	California Road System Map
CSA	Container Storage Area
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agencies
CVC	California Vehicle Code
CWA	Clean Water Act
CY	cubic yards
dBA	A-weighted decibel
DEIR	Draft Environmental Impact Report
DHSA	Drum Handling and Storage Area
DNL/Ldn	Day-Night Average Sound Level
DOC	Department of Conservation
DOF	Department of Finance
DOGGR	Division of Oil, Gas, and Geothermal Resources
DOORS	Diesel Off-Road Online Reporting System
DOSH	California Division of Occupational Safety and Health
DOT	Department of Transportation
DPM	diesel particulate matter
DSHA	drum storage handling area
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
DWTS	Dirt Water Tank System
EA	enforcement agency
EHS	Environmental Health Services
EIA	U.S. Energy Information Administration
EIR	Environmental Impact Report
EMFAC	Emission Factor model
EMS	emergency medical services
EO	Executive Order
EPA	Environmental Protection Agency

Acronyms and Abbreviations

ERP	Emergency Response Plan
ESA	Endangered Species Act
ET	evapotranspirative
FE	federally endangered
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	fire hazard severity zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FP	California fully protected
FPPA	Farmland Protection Policy Act
FRA	Federal Responsibility Area
FRAP	Fire and Resource Assessment Program
FT	federally threatened
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GAMAQI	Guidance for Assessing and Mitigating Air Quality Impacts
GCL	geosynthetic clay liner
GHG	greenhouse gases
GIS	geographic information systems
GPA	General Plan amendment
GPM	gallons per minute
GPS	Global Positioning System
GSA	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plan
GW	gigawatt
GWP	Global Warming Potential
HCP	Habitat Conservation Plan
HDPE	high density polyethylene
HEPA	high-efficiency particulate air
HFC	hydrofluorocarbon
HHD	heavy heavy-duty
HHWE	Household Hazardous Waste Element

Acronyms and Abbreviations

HI	hazard index
HMBP	Hazardous Materials Business Plan
HRA	health risk assessment
IBC	International Building Code
ICS	International Commission on Stratigraphy
IEPR	Integrated Energy Policy Report
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ISTEA	Intermodal Surface Transportation Efficiency Act
ITP	Incidental Take Permit
IWMP	Integrated Waste Management Plan
JPA	Joint Powers Agreement
KCEHD	Kern County Environmental Health Department
KCEHSD	Kern County Environmental Health Services Division
KCEOP	Kern County Emergency Operations Plan
KCFD	Kern County Fire Department
KCGP	Kern County General Plan
KCOES	Kern County Office of Emergency Services
KCOG	Kern Council of Governments
KCPWD	Kern County Public Works Department
KCSO	Kern County Sheriff's Office
KCVFHCP	Kern County Valley Floor Habitat Conservation Plan
KEDC	Kern Economic Development Corporation
KGA	Kern Groundwater Authority
KOP	key observation point
LCFS	low carbon fuel standard
LCRS	leachate collection and removal system
LDR	Land Disposal Restriction
LEA	Local Enforcement Agency
LOMR	Letter of Map Revision
LOS	level of service
LPG	liquefied petroleum gas
LRA	Local Responsibility Area
LTS	less than significant
L _v	velocity in decibels

Acronyms and Abbreviations

MBTA	Migratory Bird Treaty Act
MCE	maximum credible earthquake
MEI	maximally exposed individual
MEIR	maximally exposed individual resident
MEIW	maximally exposed individual worker
MM	Mitigation Measure
MMT	million metric tons
MND	Mitigated Negative Declaration
MPE	maximum probable earthquake
MPO	metropolitan planning organizations
MRZ	Mineral Resource Zone
MSL	mean sea level
MSW	municipal solid waste
MT	metric ton
MW	megawatts
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
NDFE	Nondisposal Facility Element
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NI	no impact
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NMFS	National Marine Fisheries Service
NO ₂	nitrogen dioxide
NOA	Notice of Availability
NOD	Notice of Determination
NOP	Notice of Preparation

Acronyms and Abbreviations

NORM	Naturally Occurring Radioactive Material
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRF	National Response Framework
NRHP	National Register of Historic Places
NSF	National Science Foundation
O ₃	ozone
OCP	Odor Control Plan
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OFFROAD	Emissions Inventory Program model
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administrations
OWHM	ordinary high-water mark
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric
PHI	California Points of Historical Interest
PI	plasticity index
PLC	Packaged Laboratory Chemicals
PM ₁₀	particulate matter with diameter of 10 microns or less
PM _{2.5}	particulate matter with diameter of 2.5 microns or less
PMI	point of maximum impact
PPV	peak particle velocity
PRC	Public Resources Code
PSD	Prevention of Significant Deterioration
PVC	polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RHNA	Regional Housing Needs Allocation
RMS	root mean square
ROG	reactive organic gases

Acronyms and Abbreviations

RPF	registered Professional Forester
RPS	Renewable Portfolio Standard
RSL	Regional Screening Levels
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCEDC	Southern California Earthquake Data Center
SCH	State Clearinghouse
SDC	seismic design category
SE	state endangered
SEMS	Standardized Emergency Management System
SF ₆	sulfur hexafluoride
SFHA	Special Flood Hazard Area
SGMA	Sustainable Groundwater Management Act
SH	State Highway
SHPO	State Historic Preservation Officer
SIP	State Implementation Plans
SJKF	San Joaquin Kit Fox
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SJVIC	San Joaquin Valley Information Center
SLAMS	State and Local Air Monitoring Stations
SLCP	short-lived climate pollutants
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act
SMBMI	San Manuel Band of Mission Indians
SO ₂	sulfur dioxide
SOI	sphere of influence
SO _x	sulfur oxide
SPCC	spill prevention, control, and countermeasure
SR	State Route
SRA	State Responsibility Area
SRRE	Source Reduction and Recycling Element
SSC	California Species of Special Concern

Acronyms and Abbreviations

ST	state threatened
STIP	State Transportation Improvement Program
STU	Stabilization and Treatment Unit
SU	significant and unavoidable
SWANCC	Solid Waste Agency of Northern Cook County
SWFP	Solid Waste Facility Permit
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Program
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCM	transportation control measure
TDS	total dissolved solids
TENORM	Technologically Enhanced Naturally Occurring Radioactive Materials
THPO	Tribal Historic Preservation Officer
TMDL	total maximum daily load
TNM	Traffic Noise Model
TSDF	Treatment, Storage, or Disposal Facility
TTAC	Transportation Technical Advisory Committee
TTB	tank treatment building
UBC	Uniform Building Code
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USDA	U.S. Department of Agriculture
USDOE	U.S. Department of Energy
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USPS	U.S. Postal Service
UST	underground storage tank
UWMP	Urban Water Management Plan
VDECS	Verified Diesel Emission Control Strategies
VERA	Voluntary Emissions Reduction Agreement
VFCE	Valley Fever Center for Excellence
VMT	vehicle miles traveled

Acronyms and Abbreviations

VOC	volatile organic compounds
WBWG	Western Bat Working Group
WDR	Waste Discharge Requirement
WEAP	Worker Environmental Awareness Program
WKWD	West Kern Water District
WL	California Watch List
WMU	Waste Management Unit
WRCC	Western Regional Climate Center
WSA	water supply assessment
ZEV	zero emission vehicle

Chapter 11 Bibliography

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