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# **CalCapture CCS Project**

**Transportation Impact Analysis** 



Prepared for: Carbon TerraVault Holdings, LLC, a carbon management subsidiary of California Resources Corporation

Prepared by: Stantec Consulting Services Inc. 2646 Santa Maria Way, Suite 107 Santa Maria, CA 93455 October 2025

Project/File: 185806775

### **Revision Schedule**

Revision	Description	Author	Date	Quality Check	Date	Independent Review	Date

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Project: 185806775

# **Acronyms / Abbreviations**

Acronym / Abbreviation	Full Name		
AADT	annual average daily traffic		
ADT	average daily traffic		
CalGEM	California Geologic Energy Management Division		
Caltrans	California Department of Transportation		
CARB	California Air Resources Board		
CCS	Carbon Capture and Sequestration		
CCU	Carbon Capture Unit		
CEC	California Energy Commission		
CEQA	California Environmental Quality Act		
CO <sub>2</sub>	carbon dioxide		
CRC	California Resources Corporation		
CTV	Carbon TerraVault Holdings, LLC		
CTV I	Carbon TerraVault I		
CUP	Conditional Use Permit		
the CUP	Collectively, CUP No. 13, Map 118; CUP No. 14, Map 118; CUP No. 5, Map 119; CUP No. 3, Map 120; CUP No. 2, Map 138; and CUP No. 6, Map 119		
EFG+	Econamine FG Plus		
EHOF	Elk Hills Oilfield		
EHPP	Elk Hills Power Plant		
EIR	Environmental Impact Report		
GT	gas turbine		
HDD	horizontal directional drilling		
HRSG	heat recovery steam generator		
I-5	Interstate 5		
Kern County	Kern County Planning and Natural Resources Department		
LOS	Level of Service		
MM	mitigation measure		
MTPD	metric tons per day		
MMTPY	million metric tons per year		
MWe	megawatt equivalent		
NOD	Notice of Determination		
OPR	Office of Planning and Research		
Project	CalCapture Carbon Capture and Sequestration Project		
RO	reverse osmosis		
SB	Senate Bill		
SCS	sustainable communities strategy		
SR	State Route		
ST	steam turbine		
Stantec	Stantec Consulting Services Inc.		
Study Area	the roadways in the immediate vicinity of the Project site		
UAV	Unmanned Aerial Vehicles		



Project: 185806775 iii

# **CalCapture CCS Project – Transportation Impact Analysis** Acronyms / Abbreviations

UIC	Underground Injection Control
U.S. EPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled



## 1 Introduction

Stantec Consulting Services Inc. (Stantec) has prepared this Transportation Impact Analysis on behalf of Carbon TerraVault Holdings, LLC (CTV), a carbon management subsidiary of California Resources Corporation (CRC) for the construction and operation of the proposed CalCapture Carbon Capture and Sequestration (CCS) Project (Project), located in the Elk Hills Oilfield (EHOF) near Tupman, Kern County, California (Project site). CRC is seeking approval of a Modification to the Elk Hills Power Plant Application for Certification from the California Energy Commission (CEC) as the lead agency. The purpose of this analysis is to determine the amount of traffic generated by the Project during construction and operation and to support the analysis of transportation impacts of the Project consistent with the California Environmental Quality Act (CEQA). The Regional Location and Project Location are shown in Figures 1 and 2.

# 1.1 Project Description

The proposed Project would capture carbon dioxide (CO<sub>2</sub>) generated as a by-product by CRC's 550-megawatt-equivalent (MWe) Elk Hills Power Plant (EHPP), located in the EHOF near Tupman, Kern County, California. The EHPP was commissioned in 2003 and is powered by two General Electric 7FA gas turbines (GTs), with two heat recovery steam generators (HRSGs) providing steam to a General Electric D11 steam turbine (ST). The Carbon Capture Unit (CCU), not including pipelines or temporary staging and parking areas, would be located immediately south of the EHPP in a 7.64-acre existing disturbed area.

Implementation of the Project will require approval of a Petition for Modification Application from the California Energy Commission (CEC), who has the exclusive authority for licensing thermal power plants of 50 MW or larger, as well as related transmission lines, fuel supply lines, and other facilities.

The CCU would utilize Fluor's Econamine FG Plus<sup>SM</sup> (EFG+) process to capture and concentrate the CO<sub>2</sub>. The EFG+ process is designed to capture 95 percent of the CO<sub>2</sub> from the total flue gas feed to the unit. The EFG+ CCU can be divided into seven primary subsystems or sections: Flue Gas Cooling, CO<sub>2</sub> Absorption, Solvent Regeneration, Solvent Maintenance, Chemical Storage and Supply, CO<sub>2</sub> Compression, and Utility Support Systems. The treated flue gas is vented to the atmosphere directly from the EFG+ CCU plant absorber. The concentrated CO<sub>2</sub> would then be compressed, dehydrated, and stripped of oxygen prior to conveyance to the permitted manifold pad, permitted as part of the approved Carbon TerraVault I (CTV I) project (State Clearinghouse No. 2022030180), which will direct the CO<sub>2</sub> to the U.S. Environmental Protection Agency (U.S. EPA) approved Class VI Underground Injection Control (UIC) wells to be injected into a depleted oil and gas reservoir located on the CRC property and approved as part of the CTV I project. The previously approved CTV I manifold pad, injection wells, depleted oil and gas reservoir and related facilities further discussed in Section 1.2 below are not part of the CalCapture CCS Project analyzed in this report.

A new, approximately 0.5-mile, 8- to 10-inch pipeline, installed primarily below ground utilizing either trenching or horizontal directional drilling (HDD) techniques, would transport the CO<sub>2</sub> from the CCU to the



# **CalCapture CCS Project – Transportation Impact Analysis** 1 Introduction

tie-in with the Carbon TerraVault I (CTV I) permitted 35R manifold facility (pad). It is anticipated that the proposed Project would capture approximately 4,400 metric tons of CO<sub>2</sub> per day (MTPD) (1.6 million metric tons of CO<sub>2</sub> per year [MMTPY]). The proposed Project is estimated to be in operation for up to 26 years.<sup>1</sup>

Water use during operation of the CalCapture CCU would be minimized by the inclusion of a hybrid cooling system (Wet Surface Air Coolers [WSAC], air coolers, secondary glycol cooling, and water cooling). Additionally, the CCU would be equipped with a water treatment system, consisting of a reverse osmosis (RO) Unit that is designed to recover and reuse water from the Cooling Tower blowdown. The recovered water is utilized as make-up to the CO<sub>2</sub> absorption system and the Wash Water WSAC Basin. A wastewater stream (less than 10 gallons per minute) would be collected at the CalCapture CCU and transferred by a new surface pipeline to the EHPP for disposal via an existing UIC Class I injection well.

The proposed Project includes a single connection to the CRC Power System and would include a connection of a new 115-kilovolt (kV) transmission line to a new CRC electrical substation. The proposed Project would require a new transmission tie line to connect the Project switching station to the existing CRC substation. Electrical power would be supplied to the CalCapture Substation with a new dedicated electrical transformer. The new 115-kV transmission tie line is expected to be built using pre-engineered steel poles with anchor bolt foundation designs.

During construction, temporary offices and existing parking areas would be used by construction personnel. Temporary office and parking areas have been designated on previously disturbed areas to the south and northeast of the Project site. Two additional areas are located approximately 5.5 miles southeast of the Project site. There are no permanent new buildings proposed for the Project, and no grading would occur within the temporary office and parking areas. Total temporary staging and parking area would be approximately 30.74 acres.

The Project anticipates that there would be a temporary increase in traffic during the construction and facilities installation phase and then return typical EHOF traffic conditions during the operational phase.

<sup>&</sup>lt;sup>1</sup>The life of the project is dependent on the sources permitted for injection into the CTV I approved storage reservoir, the ability of the project year by year to obtain CO<sub>2</sub> and inject at the maximum 2,210,000 million tons per year, and the total estimated storage capacity of up to 48 million tons of CO<sub>2</sub>.





Notes
1. Coordinate System: NAD 1983 StatePlane
California V FIPS 90405 Feet
2. Data Sources: Stantec, USGS, 2025.
3. Background: Esri. GEBCO, NOAA, National
Geographic, Garin, HERE, Geonames.org
Copyright:@2013 National Geographic Society, icubed

Capture Facility

Temporary Parking, Office, and Staging Areas

Proposed Sub Location (250 x 250)

Substation Extension  $\times\!\!\times\!\!\times$ Proposal

New BPSTG & Transformer

Warehouse Cooling Water Sump

Township, Range, Section\*

\*Entire map extent within Township 30S Range 23E.

**Electrical Lines** 

CO2 Line **CWR** Line

**CWS Line** 

Condensate Line **HP Steam Line** 

LP Steam Line Raw Water Line

RO Permeate Stream Pipeline

CWS Line Alternative

1,000 (At original document size of 8.5x11) 1:12,000





Prepared by MMD on 2025-07-31 TR by CT 2025-07-31 IR by ES on 2025-07-31 Kern County, CA

California Resources Corporation
CalCapture Carbon Capture and Sequestration Project

Figure **2a** Title Site Plan





Temporary Parking, Office, and Staging Areas

#### Township, Range, Section\*

Section

\*Entire map extent within Township 31S Range 24E.







Project Location	Prepared by MMD on 2025-07-31
Kern County, CA	TR by CT 2025-07-31 IR by ES on 2025-07-31
Client/Project	185806775

California Resources Corporation
CalCapture Carbon Capture and Sequestration Project

Figure No.
2b
Title
Site Plan

Notes
1. Coordinate System: NAD 1983 StatePlane
California V FIPS 0405 Feet
2. Data Sources: Stantec, USGS, 2025.
3. Background: Esri. GEBCO, NOAA, National
Geographic, Garin, HERE, Geonames.org
Copyright:@2013 National

# 1.2 CTV I Background Information

On December 31, 2024, the U.S. EPA issued four UIC Class VI well permits to CTV, a carbon management subsidiary of CRC.

The specific U.S. EPA permits issued for the four wells are as follows:

- R9UIC-CA6-FY22 1.1 for well 373-35R
- R9UIC-CA6-FY22 1.2 for well 345C-36R
- R9UIC-CA6-FY22 1.3 for well 353XC-35R
- R9UIC-CA6-FY22 1.4 for well 363C-27R

These four wells would be utilized to inject the CO<sub>2</sub> captured from the proposed Project into the Monterey Formation 26R storage reservoir located approximately 6,000 feet below the ground surface. The CTV I project area is located within the EHOF, which is a suitable area for long-term CO<sub>2</sub> storage and sequestration. The CTV I project was designed to implement sustainable CCS in support of California's initiative to combat climate change by reducing CO<sub>2</sub> levels in the atmosphere.

In addition to the Class VI Permit, CTV obtained a land use permit from the Kern County Planning and Natural Resources Department (Kern County) in 2024. Specifically, the CTV I project was approved by the Kern County Board of Supervisors on October 21, 2024, based on a final Environmental Impact Report (EIR, State Clearinghouse #2022030180) prepared by Kern County and certified by it on the same date. A Notice of Determination was filed with the Kern County Clerk on October 22, 2024. The CTV I project is subject to the terms, conditions and restrictions set forth in the Conditional Use Permits (CUP) issued by Kern County and identified as CUP No. 13, Map 118; CUP No. 14, Map 118; CUP No. 5, Map 119; CUP No. 3, Map 120; CUP No. 2, Map 138; and CUP No. 6, Map 119 (collectively, "the CUP"). Implementation of the CUP authorizes the construction and operation of underground CO<sub>2</sub> facility pipelines to support the CTV I CCS facility and related infrastructure (e.g., injection/monitoring wells, CO<sub>2</sub> manifold piping and metering facilities) within the 9,104-acre project site, located within the EHOF.

Four monitoring wells permitted by the California Geologic Energy Management Division (CalGEM), as part of the CUP issued by Kern County for the CTV I project would be used for CO<sub>2</sub> monitoring. In addition, six CTV I permitted wells would be used to monitor for seismic activity. The seismic monitoring wells will be used to detect seismic events at or above magnitude (M) 1.0 in real time as required by the California Air Resources Board (CARB) CCS Protocol under the Low Carbon Fuel Standard (LCFS) (C.4.3.2.3). Additionally, the California Integrated Seismic Network will be monitored continuously for indication of a 2.7 M or greater earthquake or greater occurring within a 1-mile radius of injection operations from commencement of injection activity to its completion.

Monitoring activities would extend beyond the injection phase of the Project pursuant to Code of Federal Regulation (CFR) Title 40 Section 146.93 until site closure is granted. Monitoring requirements during post-injection are similar to those during injection, with activities such as sampling occurring quarterly and monitoring well integrity testing at frequency per U.S. EPA requirement.



As noted above, the facilities approved as part of the CTV I project, including but not limited to the manifold, pad, injection wells, monitoring wells and related transmission lines, pipelines and other related facilities that have already been approved by applicable agencies with jurisdiction over those facilities, including the U.S. EPA, CalGEM and Kern County, are not included as part of the proposed Project. Accordingly, such facilities are not analyzed in this report.

## 1.3 Project Location

The Project is located within the EHOF in the southwestern edge of the San Joaquin Valley near Tupman in Kern County, California.

The Project comprises portions of six parcels owned by CRC. The Project is contained within the following sections of EHOF: sections 26, 34, and 35 of Township 30 South Range 23 East and sections 10 and 11 of Township 31 South Range 24 East, Mount Diablo Base and Meridian (MDB&M), Kern County, State of California (Table 1). The proposed Project would be located on approximately 52 acres within the identified parcels.

Table 1 Project Parcel Data

Assessor's Parcel Number	Section/ Township/ Range	Acreage*	
158-090-19	Section 35/ Township 30S/ Range 23E	590.61	
158-090-16	Section 35/ Township 30S/ Range 23E	14.78	
158-090-02	Section 26/ Township 30S/ Range 23E	640	
158-090-04	Section 34/ Township 30S/ Range 23E	682.86	
298-070-05	Section 11/Township 31S/Range 24E	640	
298-070-06	Section 10/Township 31S/Range 24E	640	

Notes:

Assessor's parcel acreages from Kern County Web Map (Kern County GIS, 2025).



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# 2 Existing Conditions

### 2.1 Existing Roadway System

Interstate 5 (I-5), State Route (SR) 58, SR 33, and SR 119 each provide regional access to the Project site. It is a four-lane divided roadway and generally runs in a north-south direction. SR 58 is approximately 8 miles north of the Project site. It is a two-lane undivided roadway and runs in an east-west direction in the vicinity of the Project. SR 33 is located to the west and south of the EHOF and allows access to CRC's EHOF from the western most gate. It is a two-lane undivided roadway. SR 119, also referred to as Taft Highway, is approximately 6 miles southeast of the Project site and is also a two-lane undivided roadway.

The Project site could be accessed from the south via SR 119/Taft Highway exit on I-5, Valley West Road, Elk Hills Road, and Skyline Road; from the north, the Project site could be accessed via SR 58 exit on I-5, Wasco Way, Brite Road, Buttonwillow Drive, Elk Hills Road, and Skyline Road. From the Bakersfield area, the Project site could be accessed via SR 58 to either of the preceding routes leading to the Project site. Access to the EHOF via SR 33 is unlikely given the preferred access routes discussed in this report. The two additional temporary staging and parking areas (Section 10 and 11, T31S, R24E) that are located approximately 5.5 miles southeast of the Project site would be accessed from an unnamed access road off SR 119. The access point consists of a secured gate, with badge-in access only.

The following roadways in the immediate vicinity of the Project provide access to the Project site. Skyline Road (private/restricted access) runs in an east-west direction and is generally a two-lane undivided roadway. Elk Hills Road is a Kern County two-lane undivided roadway immediately east of the Project site and runs in a north-south direction.

Kern Transit provides passenger bus service between and within rural communities of Kern County and the nearest road to the proposed Project that it utilizes is SR119. It also provides intercity/regional fixed routes service and connections to Metrolink. Kern Transit Route 120 Taft-Bakersfield represents the nearest bus stop at Valley Acres, approximately 6 miles southeast of the Project site. Non-motorized transportation refers to means of travel such as walking or biking. There are no pedestrian or bike facilities in the vicinity of the Project.

Elk Hills Buttonwillow Airport is approximately 6 miles north of the Project site. Elk Hills Buttonwillow Airport uses the identifier code of L62. It is located on 216 acres and serves general aviation training. It is noted as an operating area for Unmanned Aerial Vehicles (UAVs) under permit to BARKS, Inc., on a few days each week and serves as the host site for the Best of The West RC aircraft fly-in every fall.



## 2.2 Existing Traffic Data

This section summarizes existing traffic volumes on roadways in the vicinity of the Project that could be affected by the Project. Existing 24-hour mid-block average daily traffic (ADT) count data was collected in May 2025. The traffic count data sheets are provided in Appendix A. Annual average daily traffic (AADT) counts for state highways were obtained from the California Department of Transportation (Caltrans) Traffic Census Program for the year 2022, which is the most recent available year. Table 2 summarizes the AADT for the roadway segments that could potentially be affected by the Project. The study locations are the roadways in the immediate vicinity of the Project that would be used to access the Project site, and each are anticipated to have fewer than 50 trips added on these roadways during the peak hour under operational conditions.

Table 2 Annual Average Daily Traffic Volumes on Potentially Affected Roadway Segments

Roadway Segment	Facility Type	AADT
1. SR-58, east of Wasco Way <sup>1</sup>	2-lane Rural Highway	4,700
2. Wasco Way, south of SR 58 <sup>2</sup>	2-lane Rural Highway	1,000
3. Brite Road, west of Mirasol Avenue <sup>2</sup>	2-lane Rural Highway	1,400
4. Elk Hills Road, south of Buttonwillow Drive <sup>2</sup>	2-lane Rural Highway	1,400
5. Elk Hills Road, north of Skyline Road <sup>2</sup>	2-lane Rural Highway	1,300
6. Valley West Road, east of Elk Hills Road <sup>2</sup>	2-lane Rural Highway	1,100
7. SR 119 at East Limits Dustin Acres <sup>1</sup>	2-lane Rural Highway	9,600
8. SR 119 at Tupman Road <sup>1</sup>	2-lane Rural Highway	10,400
9. SR 119 at Jct. SR 43 North <sup>1</sup>	2-lane Rural Highway	10,600
10. SR 119 at Jct. I-5 <sup>1</sup>	2-lane Rural Highway	6,300

Source of AADT:



Project: 185806775

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<sup>&</sup>lt;sup>1</sup>2022 Traffic Volumes, Caltrans Traffic Census Program

<sup>&</sup>lt;sup>2</sup>2025 Traffic Volumes, Stantec

# 3 Regulatory Setting

## 3.1 Kern County General Plan

The Kern County General Plan is the foundation and central feature of the local planning process. It is prepared, adopted, and maintained by the County to govern the physical development of all land area under its jurisdiction. The following are the important functions that the Kern County General Plan is intended to serve:

- The identification of the community's physical development goals and goals relating to environmental, economic, and other factors.
- The incorporation of policies for maintaining or improving the character of existing developed uses and for guiding the location and nature of future development in order to ensure that the community's goals are achieved.
- The consideration of aspects of local conditions affecting physical development and change in order to ensure that problems and opportunities are analyzed and addressed adequately within the context of local, regional, Statewide, and national goals and policies.
- The provision of information to the citizens of the community about the planning and decisionmaking process of the local government.
- The description of procedures and measures intended to improve the coordination of local government actions affecting the development of the community.

The Circulation Element of the Kern County General Plan consists of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities that are all corelated with the land use element of the Kern County General Plan. The purpose of the Circulation Element is to set up local Goals and guiding Policies about building transportation improvements. Following is a list of the Plan's seven unique Goals:

- 1. To make certain that transportation facilities needed to support development are available. To ensure that these facilities occur in a timely manner so as to avoid traffic degradation.
- Kern County intends to provide plans for circulation infrastructure in support of the Land Use, Open Space and Conservation Element.
- 3. To plan for transportation modes available to all segments of the population, including people with restricted mobility.
- 4. Kern County will plan for a reduction of environmental effects without accepting a lower quality of life in the process.



- Maintain a minimum 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.
- 6. Coordinate with the California Department of Transportation (Caltrans) regarding various transportation developments within the County.
- 7. Kern County through its representatives on the Kern COG Board of Directors shall coordinate with Kern County cities and Caltrans to develop more effective transportation planning and congestion management programs.

#### Policies to Maintain Level of Service

Kern County General Plan's policies consider LOS D acceptable within the general plan area for County maintained roads unless the roads are part of an adopted Community Plan or Specific Plan which utilizes Smart Growth policies that encourage efficient multi-modal movements. Caltrans standard for State highways is LOS C-D.

### 3.2 Methodology

#### 3.2.1 Defining Study Area

Kern County guidelines specify that a traffic analysis be prepared for any city, state, or county facility (mainline, interchange, structure, intersection, or any project on the Transportation Impact Fee list) when the peak hour trip generation onto the facility exceeds 50 trips. As discussed in Section 5.2.2, TRA-2 Impact Analysis, the Project is anticipated to generate fewer than 50 operational trips during the peak hour; therefore, no roadway would meet the traffic analysis criteria. However, the Project is expected to generate a greater number of short-term trips during construction and, as such, a Study Area consisting of the roadways in the immediate vicinity of the Project site has been established to determine the effect of Project trips during the construction period.

## 3.3 Non-CEQA Transportation Analysis

Level of service (LOS) is a qualitative index of the performance of an element of a transportation system. The LOS for traffic is designated from A through F, with LOS A indicating free-flowing conditions and LOS F indicating severe traffic congestion and delays. The Highway Capacity Manual Sixth Edition, a standard reference published by the Transportation Research Board, contains specific criteria and methods for assessing LOS. LOS characteristics for roadway segments are presented in Table 3.



Table 3 Roadway Level of Service Descriptions

Level of Service	Traffic Flow Description		
Α	Minimal or no vehicle delay		
В	Slight delay to vehicles		
С	Moderate vehicle delays, traffic flow remains stable		
D	More extensive delays at intersections		
E	Long queues create lengthy delays		
F	Severe delays and congestion		

Source: Transportation Research Board, National Research Council. 2016. Highway Capacity Manual. Sixth Edition.

#### 3.3.1.1 Significance Criteria

Kern County has historically used a threshold of LOS D for the acceptable operation of its transportation facilities (Kern County 2009). For the purpose of this analysis, the Project would be considered to have an undesirable effect on traffic if it would cause the operation of a transportation facility to worsen from LOS D to LOS E or F.

Table 4 provides typical LOS and AADT volume thresholds for two-lane uninterrupted flow rural highways. Since Kern County does not have established AADT volume thresholds for uninterrupted flow on rural highways, the volume thresholds noted here are based on typical values utilized by transportation engineers, such as those documented in the U.S. Department of Transportation Federal Highway Administration guidelines, a source commonly used by traffic engineers for analyses of this type. As shown, a two-lane undivided highway, such as those providing access to the Project site, can typically carry up to 24,200 AADT for conditions of LOS D or better.

Table 4 Roadway Level of Service for Rural Two-Lane Highways

Lanes	Madian		LOS / ADT		
	Median —	Α	В	С	D
2	Undivided	-	<u>&lt;</u> 13,900	≤ 19,000	≤24,200

Source: U.S. Department of Transportation Federal Highway Administration. 2017. Simplified Highway Capacity Calculation Method for the Highway Performance Monitoring System

### 3.4 Vehicle Miles Traveled

CEQA guidelines state that, generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts, incorporating the requirements of Senate Bill (SB) 743. SB 743 required the Governor's Office of Planning and Research (OPR) to establish recommendations for identifying and mitigating transportation impacts under CEQA (OPR 2018). Generally, SB 743 moved away from using delay-based LOS as the metric for identifying Project impacts and uses VMT instead. The final OPR Technical Advisory, released in December 2018, provides guidance on evaluating transportation impacts using VMT and is the guidance on which VMT analysis contained in this report is based on.



# **CalCapture CCS Project – Transportation Impact Analysis** 3 Regulatory Setting

Prior to undertaking a detailed VMT analysis, the OPR Technical Advisory recommends a screening process "to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study." The OPR Technical Advisory suggests that lead agencies may screen out VMT impacts using project size criteria, maps of low VMT areas, transit availability, and provision of affordable housing. For this Project, the screening criterion related to project size is applicable in regard to the amount of traffic that is generated under operational conditions.

The OPR Technical Advisory recommends that, absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a sustainable communities strategy (SCS) or a General Plan, projects that generate or attract fewer than 110 trips per day may generally be assumed to cause a less-than-significant transportation impact.

As discussed in the OPR Technical Advisory, CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).) The OPR Technical Advisory then discusses how typical project types generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, OPR concludes that absent substantial evidence otherwise, it is reasonable to assume that the addition of 110 or fewer trips could be considered not to lead to a significant impact. The generally applicable screening threshold recommended by the OPR Technical Advisory is specifically applicable to the Project Site as further described in Section 5.2.1 below.

# 3.5 Existing Traffic Operations

Existing traffic conditions for the study roadway segments were evaluated based on the LOS and AADT thresholds for rural two-lane highways, as shown in Table 4. The roadway capacities for the target LOS D for Kern County rural roadway segment were compared to the observed traffic volumes noted in Table 2.

Table 5 shows the existing AADT and LOS. The maximum AADT volumes that would allow the rural highway segments to maintain an acceptable LOS D is less than or equal to 24,200 ADT as shown in previously referenced Table 4. As shown, all the existing two-lane rural highway segments currently operate at an acceptable LOS B.



# **CalCapture CCS Project – Transportation Impact Analysis** 3 Regulatory Setting

Table 5 Existing Level of Service of Study Segments

Roadway Segment	Facility Type	Average Annual Daily Traffic	LOS
1. SR-58, east of Wasco Way	2-lane Rural Highway	4,700	В
2. Wasco Way, south of SR 58	2-lane Rural Highway	1,000	В
3. Brite Road, west of Mirasol Avenue	2-lane Rural Highway	1,400	В
4. Elk Hills Road, south of Buttonwillow Drive	2-lane Rural Highway	1,400	В
5. Elk Hills Road, north of Skyline Road	2-lane Rural Highway	1,300	В
6. Valley West Road, east of Elk Hills Road	2-lane Rural Highway	1,100	В
7. SR 119 at East Limits Dustin Acres	2-lane Rural Highway	9,600	В
8. SR 119 at Tupman Road	2-lane Rural Highway	10,400	В
9. SR 119 at Jct Rte 43 North	2-lane Rural Highway	10,600	В
10. SR 119 at Jct Rte 5	2-lane Rural Highway	6,300	В



Project: 185806775 14

# 4 Project Trip Generation

This section presents the trip generation during construction, operation and maintenance of the Project, and the distribution of the Project trips on the adjoining roadway network.

## 4.1 Construction Trip Generation

Trip generation is defined as the number of vehicle trips produced by a particular type of land use or project. A trip is defined as vehicle movement in one direction. The total number of trips generated by a particular land use type or project includes both inbound and outbound trips. Estimates of Project trip generation are used to establish the amount of traffic added to roadways by the Project and are applied in subsequent analysis to determine the Project's effect on roadway capacity.

During construction, trucks would access the Project site from the north side of Skyline Road, directly across from the main construction personnel parking area (Figure 2). Construction trucks could access the Project site from the south via SR 119 exit on I-5, Valley West Road, Elk Hills Road and Skyline Road; from the north, the Project site could be accessed via SR 58 exit on I-5, Wasco Way, Brite Road, Buttonwillow Drive, Elk Hills Road and Skyline Road. Construction of the Project is expected to be initiated in the fourth quarter of 2026 or the first quarter of 2027, would take approximately 2.5 years to complete, and generally includes the following tasks:

- Mobilization
- Demolition
- Grading
- Site Preparation
- Facility Construction
- Pipeline Construction

The analysis of construction trip generation is based on the average daily volume of construction traffic. For the purposes of this analysis, the Project construction trip generation estimates are calculated based on the trips generated by heavy duty trucks (construction equipment data provided by CTV that includes construction material delivery and dump trucks, water delivery trucks, etc.) and the trips generated by the construction workers. Based on the summary of anticipated construction equipment peak estimates during the 2.5 years construction period, a conservative assumption of approximately 31 construction equipment vehicle deliveries are expected during the peak construction month. Based on CRC provided data, an additional 9 trucks per month are required for deliveries and waste haul-off. Therefore, the Project would require a total of 40 delivery trucks per month (i.e., 31 construction equipment delivery trucks per month



#### CalCapture CCS Project - Transportation Impact Analysis

4 Project Trip Generation

and 9 trucks per month for deliveries and waste haul-off). The construction equipment includes the following:

- Bore/Drill Rigs
- Bobcat Skip Loader
- Backhoe
- Boom Lifts
- Graders
- Tractors/Loaders/Backhoes
- Concrete Mixer, Transit
- Roller Vibrator
- Manlift, Telescoping
- Highway Trucks
- Flatbed Trucks
- Water Spray Truck
- Skid Steer Loaders
- Cranes
- Forklifts

Delivery of construction equipment vehicles for use on site would generate a cumulative total of 160 trips (40 delivery trucks times two trips each for delivery and two trips each for removal) spread out over the entire duration of the construction period (i.e., over 2.5 years).

Depending on the construction activities underway, the construction equipment requirements would vary throughout the course of any given month and across the life of the Project. There would be approximately 20 working days per month over the estimated 2.5-year duration of construction of the Project. The Project would generate an average of 8 construction equipment trips per day if the 160 ADT is spread equally over 20 working days. As a conservative assumption, if there would be 50 percent more than the average 8 trips per day during peak construction activity, the Project would generate a maximum of 12 construction equipment vehicles trips per day.

During construction, the number of workers on the site would vary daily. However, at the peak of construction, the number of workers on site is anticipated to be 500 workers, which includes indirect personnel. CRC has committed to use local labor to the maximum extent practical for the specific skills required of Project construction. Most workers would commute to and from the Project site daily from the nearby Bakersfield area approximately 34 miles away from the Project. Although it is possible that workers would participate in carpools or vanpools to reduce their reliance on single occupancy vehicles and reduce their commute costs, conservative estimates were prepared assuming that all trips would be in single occupancy vehicles. As such, there would be up to 1,000 construction worker trips (500 trips inbound during the AM peak hour and 500 trips outbound during the PM peak hour) each day during peak construction activity.



4 Project Trip Generation

The construction trip generation for the Project is shown in Table 6. As shown, the Project is expected to generate up to a total volume of approximately 1,012 ADT, which includes 12 construction vehicle trips and 1,000 construction worker trips.

Table 6 Trip Generation During Peak Construction

	Average Daily Trips (ADT)		
Site	Construction Worker Trips <sup>1</sup>	Construction Vehicle Trips2	Total Trips
CRC CalCapture	1,000	12	1,012

Note:

## 4.2 Operations Trip Generation

Once constructed, the operational aspects of the Project would require up to 16 employees per day, with certain employees shared with the power plant. To be conservative, assuming 16 employees per day, there would be approximately 40 trips per day based on an average trip rate of 2.5 trips per employee, <sup>2</sup> which is generally not perceptible and is less than the 110 trips per day threshold presented in the OPR Technical Advisory; therefore, the Project would not result in significant impacts to the surrounding roadway network.

# 4.3 Project Construction Trip Distribution

The geographic distribution of the Project-generated trips was determined based on the Project site location in relation to the surrounding uses while taking into account proposed driveway locations, existing traffic flow patterns, and engineering judgement. Based on the information provided by CRC, most of the workers would travel from the Bakersfield area approximately 34 miles from the Project site, on average. The specific proportion of Project construction trips on each potential route to the site can vary from day to day based on the specific type of construction activity occurring on that day. Approximately 50 percent of the Project construction trips are assumed to travel north on Elk Hills Road and the remaining 50 percent are assumed to travel south on Elk Hills Road (i.e., 50 percent of the Project trips could travel to the north from Skyline Road to Elk Hills Road, Brite Road, Buttonwillow Drive, Wasco Way, and SR-58 to I-5, and the other 50 percent could travel to the south via Valley West Road and SR-119 to I-5). A conservative assumption where 100 percent of the Project trips travel on all the study roadway segments is also discussed.

<sup>&</sup>lt;sup>2</sup> The average trip rate of 2.5 trips per employee assumes that employee work during the day shift is two trips (one trip in and one trip out). In addition, some employees may travel an extra trip in between (e.g., lunch, errand), and there may be occasional deliveries to the site. Therefore, an average of 2.5 trips per employee is assumed.



<sup>&</sup>lt;sup>1</sup> for 500 employees (one trip inbound during AM peak hour and one trip outbound during PM peak hour)

<sup>&</sup>lt;sup>2</sup> includes construction equipment, deliveries, and waste haul-off per day during peak construction

# 5 Environmental Analysis

## 5.1 Significance Criteria

In accordance with the CEQA Guidelines Appendix G Environmental Checklist,<sup>3</sup> the following questions are to be analyzed and evaluated to determine whether transportation impacts are significant. Would the proposed project:

- a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
- b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
- c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- d. Result in inadequate emergency access?

## 5.2 Impact Analysis

### 5.2.1 TRA-1 Impact Analysis

Impact TRA-1 Conflict with a program plan, or ordinance or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities?

**Less than significant impact.** The Project does not conflict with the Kern County General Plan, any program plan, ordinance, or policy addressing the circulation system. The Project does not propose to amend or adjust roadway classifications, the roadway network, transit routes, or bicycle networks as identified in the Kern County General Plan.

The Project area is served by Kern Transit bus service. Kern Transit Route 120 Taft-Bakersfield, services in the Project area, with a bus stop at Valley Acres, approximately 6 miles southeast of the Project site. There are no bus stops near the project access points on Elk Hills Road and SR 119. There are no pedestrian or bike facilities in the vicinity of the Project.

Vehicular access to the Project site would be from Skyline Road, directly across from the main construction personnel parking area. Project site access improvements would be constructed in accordance with Kern County standards and would not conflict with other improvements planned for the area. By complying with

<sup>&</sup>lt;sup>3</sup>Appendix G Environmental Checklist Form, Guidelines for the Implementation of the California Environmental Quality Act, 2023



# **CalCapture CCS Project – Transportation Impact Analysis** 5 Environmental Analysis

Kern County standards, the Project would not create hazards or barriers for pedestrians, bicyclists, or local transit service.

During construction, activities would be confined to the Project site and the two additional temporary parking and staging areas that are located approximately 5.5 miles southeast of the Project site, and no road closures or detours are anticipated. Therefore, the Project would not modify or interfere with the bus facilities closest to the Project site during construction or operation.

#### **Construction Traffic**

Although the Kern County General Plan does not have established AADT volume thresholds, Kern County has historically used a threshold of LOS D for the acceptable operation. Project-generated construction traffic was added to existing conditions to represent "existing plus Project construction conditions." Similar to the analysis of the existing traffic conditions, the existing plus Project construction conditions for the roadway segments were evaluated based on the LOS and AADT thresholds for uninterrupted flow rural highways (Table 4). The roadway capacities for the target LOS D were compared to the existing plus the additional Project construction conditions traffic volumes. The maximum AADT volumes that would allow the highway segments to maintain an acceptable LOS D is less than or equal to 24,200. As shown in Table 7, all the roadway segments continue to operate at LOS B with the addition of construction traffic and each are at or below the target threshold of LOS D. As mentioned above, 50 percent of Project trips (i.e., 506 Project trips) are oriented north of the Project site and the other 50 percent are oriented south of the Project site. Even with a conservative assumption that 100 percent of the Project trips (1,012 project trips) travel through all the study segments, the roadway segments would still continue to operate at LOS D or better. While LOS is not considered a CEQA impact, Project-generated construction traffic nonetheless does not conflict with the Kern County General Plan's policy to maintain target LOS.

Table 7 Existing Plus Project Construction Conditions Level of Service of Study Segments

Roadway Segment	Facility Type	Average Annual Daily Traffic	LOS
1. SR-58, east of Wasco Way	2-lane Rural Highway	5,206	В
2. Wasco Way, south of SR 58	2-lane Rural Highway	1,506	В
3. Brite Road, west of Mirasol Avenue	2-lane Rural Highway	1,906	В
4. Elk Hills Road, south of Buttonwillow Drive	2-lane Rural Highway	1,906	В
5. Elk Hills Road, north of Skyline Road	2-lane Rural Highway	1,806	В
6. Valley West Road, east of Elk Hills Road	2-lane Rural Highway	1,606	В
7. SR 119 at East Limits Dustin Acres	2-lane Rural Highway	10,106	В
8. SR 119 at Tupman Road	2-lane Rural Highway	10,906	В
9. SR 119 at Jct. SR 43 North	2-lane Rural Highway	11,106	В
10. SR 119 at Jct. I-5	2-lane Rural Highway	6,806	В



#### **Operational Traffic**

Based on the information provided by CTV and as mentioned in Section 4.2, Operations Trip Generation, once constructed, the operational aspects of the Project would require up to 16 employees per day, with certain employees shared with the power plant. Assuming 16 employees per day, there would be approximately 40 trips per day based on an average trip rate of 2.5 trips per employee. The average trip rate of 2.5 trips per employee assumes that employees work during the day shift is 2 trips (1 trip in and 1 trip out). In addition, some employees may travel an extra trip in between (e.g., lunch, errand), and there may be occasional deliveries to the site. Therefore, the Project would generate approximately 40 trips per day based on 16 employees.

Table 8 Operational Trip Generation

No. of Employees (per day)	Average trip rate <sup>1</sup> (per employee)	Total Trips during Operations (per day)
16	2.5	16 x 2.5 = 40
Note: <sup>1</sup> includes 2 trips (1 trip in and 1 trip out	:) for employee's day shift, an extra to	rip in between (e.g., lunch, errand), and

occasional deliveries

This increase in trips would not be impactful to any plans because the roadway segments would continue to operate at LOS D or better. For CEQA analysis purposes, it is noted that the additional 40 trips is less than the 110 trips per day screening threshold for small projects presented in the OPR Technical Advisory. This overall threshold is particularly applicable to the Project and the Project Site because (among other reasons) the Project would not involve construction of new infrastructure, the Project is not located within an environmentally sensitive area, and it is consistent with the RTP/SCS. It therefore meets the key elements of the "small project" screening threshold identified by the OPR Technical Advisory.

More specifically, as explained in the OPR Technical Advisory, the small project screening threshold is based on the categorical exemption for existing facilities set forth in CEQA Guidelines Section 15301, subdivision (e)(2), which expressly includes additions to existing structures in an areas where public infrastructure is available to allow for maximum planned development and the project is not located within an environmentally sensitive area, and a project would not generate more than an additional 110 additional trips per day. The Project would therefore cause a less-than-significant impact to VMT. The Project will result in a less than significant impact and no mitigation is required.



### 5.2.2 TRA-2 Impact Analysis

Impact TRA-2 Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b)?

**Less than significant impact.** CEQA Guidelines Section 15064.3 subdivision (b) describes the Criteria for Analyzing Transportation Impacts for Land Use Projects (what the Project would be considered under CEQA):

(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

#### **Construction Traffic**

Construction-related VMT is addressed in the context of air quality and greenhouse gas as part of a separate study. Construction VMT is temporary and is not applicable to the transportation thresholds of significance recommended in the OPR Technical Advisory, which are based on a measurement of the operational average VMT per capita.

#### **Operational Traffic**

The OPR Technical Advisory recommends that, absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a SCS or a General Plan, projects that generate or attract fewer than 110 trips per day may generally be assumed to cause a less-than-significant transportation impact. The Project is consistent with the Kern County General Plan because the Project would not change the current or planned county roadway system.

Based on the information provided by CTV and as mentioned in Section 4.2, Operations Trip Generation, once constructed, the operational aspects of the Project would require up to 16 employees per day, with certain employees shared with the power plant. Assuming 16 employees per day, there would be approximately 40 trips per day based on an average trip rate of 2.5 trips per employee. The average trip rate of 2.5 trips per employee assumes that employees work during the day shift is 2 trips (1 trip in and 1 trip out). In addition, some employees may travel an extra trip in between (e.g., lunch, errand), and there may be occasional deliveries to the site. Therefore, the Project's daily operational trip generation is forecast to be approximately 40 trips per day based on 16 employees.

The Project will result in a less than significant impact and no mitigation is required.



# 5.3 TRA-3 Impact Analysis

Impact TRA-3 Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than significant with mitigation. The Project does not increase hazards due to a geometric design feature or incompatible uses but has potential to increase hazards due to the use of oversized and/or overweight vehicles that would need to be mitigated. Delivery of heavy construction equipment to the Project site would require oversize and/or overweight vehicles. Development of the Project site and any site access improvements requires compliance with Kern County development guidelines and code, which follow the Kern County General Plan policies and actions that encourage the safe design of streets. Truck and waste haul-off trucks access to the Project site would be from Skyline Road, directly across from the main construction personnel parking area. The new site access roads would be constructed, and existing access roads would be improved in accordance with Kern County standards.

During construction, the Project would generate traffic through the transport of workers, construction equipment, and other materials delivery to and from the Project site and the two additional temporary parking and staging areas that are located approximately 5.5 miles southeast of the Project site. The use of roadways by oversized/overweight vehicles carrying heavy construction equipment can increase the risk to drivers in the vicinity of the Project site; however, construction equipment and materials would be stored onsite and in the two additional temporary staging areas. The Project would not involve any offsite construction work. Construction activities are anticipated to be confined to the Project site, and no road closures or detours are anticipated; therefore, there would be no substantial increase in hazards. If any road closures or detours are required, the Project would secure appropriate transportation permits and prepare and implement Traffic Control and Management Plan to ensure the safety of roadway users in accordance with Caltrans and the County requirements. Also, there would be no incompatible uses introduced to the Project area that could cause vehicle conflicts (e.g., farm equipment). Therefore, the Project would result in a less-than-significant impact with implementation of mitigation measure (MM) TRA - 1 and MM TRA -2.

## 5.4 TRA-4 Impact Analysis

#### Impact TRA-4 Result in inadequate emergency access?

Less than significant with mitigation. The Project would not result in inadequate emergency access during Project operations, as there are no proposed alterations to existing public roadways. Truck access to the Project site would be from Skyline Road, directly across from the main construction personnel parking area. The Project site and the two additional temporary parking and staging areas that are located approximately 5.5 miles southeast of the Project site would be designed, constructed and maintained to allow for proper ingress and egress and comply with turning radius requirements of emergency vehicles and will not cause hazardous driving conditions since the access points would be designed in accordance with Kern County standards. Site access improvements would be constructed in accordance with Kern



# **CalCapture CCS Project – Transportation Impact Analysis** 5 Environmental Analysis

County standards and would not conflict with other improvements planned for the area. However, construction activities, which may temporarily restrict vehicular traffic, would have the potential to result in temporary or intermittent interruptions in emergency access prior to the implementation of mitigation measures. Therefore, the Project would be required to implement adequate and appropriate measures to facilitate the passage of persons and vehicles through or around road detours and/or closures. With mitigation, the Project would not result in inadequate emergency access. Development of the Project site would not alter or impede emergency response routes or plans set in place by the County. Therefore, the Project would have a less-than-significant impact on emergency access with the implementation MM TRA-1 and MM TRA-2.



# 6 Decommissioning

If CRC decides to no longer use the EHOF properties as a CCS facility, CRC would then either divest the Project or decommission the Project site facilities and wells in accordance with applicable law. Post-injection testing and monitoring requirements would also be followed to monitor the CO<sub>2</sub> plume after injection has ceased as required by 40 CFR 46.90. Permits for the removal of surface facilities associated with the Project would be obtained from Kern County. In lieu of removal, surface facilities potentially may be re-purposed for other site uses in accordance with applicable law. Any surface facility removal activities would be limited to removal or demolition of existing equipment and performed in accordance with applicable law. As with construction VMT, decommissioning VMT is also temporary and is not applicable to the transportation thresholds of significance recommended in the OPR Technical Advisory, which are based on a measurement of the operational average VMT per capita.



# 7 Cumulative Impacts

Cumulative conditions have been considered as construction of other developments in the vicinity during the same construction timeframe as the Project could have a temporary cumulative impact on traffic conditions. Environmental documents for current cumulative projects within a 5-mile radius of the Project, as provided by Kern County, were reviewed to ascertain whether they would be constructed in a similar timeframe and would affect the same roadways as the Project. The five-mile limit was selected based on Stantec's professional judgment and project experience in the preparation of traffic impact studies as the limit of potential impacts associated with a cumulative development scenario. CRC's CTV I project is included in the Cumulative Project list provided by Kern County (Appendix B). The list shows that most of the projects are either CCS projects or addressed via the Oil and Gas Ordinance and Second Supplemental Revised EIR projects located in scattered locations within Kern County. The traffic from the construction of these related projects would have a nominal effect on traffic volumes on the surrounding roadway network due to the remote and dispersed locations of the related project sites. In addition, the Project's biggest increase in trips would only be due to construction, which is short-term and temporary. Trips from Project operation would only require up to 16 employees per day. On this basis, there would be no additional traffic impacts under cumulative conditions



# **8 Mitigation Measures**

The following MMs are proposed for the Project to reduce transportation impacts to less than significant.

**MM TRA-1:** Prior to issuance of construction permits, building permits, or encroachment permits, the Applicant or its construction contractors will prepare and submit a Traffic Control and Management Plan to the County and Caltrans for approval. The Traffic Control and Management Plan will be prepared in accordance with both the Manual on Uniform Traffic Control Divisions and Work Area Traffic Control Handbook, and must include but not be limited to the following actions:

- 1. Specify timing of deliveries of heavy equipment and building materials.
- 2. Direct construction traffic with a flagger.
- Place temporary signage, 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. Provide access for emergency vehicles to the Project site.
- 5. Maintain access to adjacent property.
- Specify both construction-related vehicle travel and oversized load haul routes, minimize
  construction traffic during the morning and afternoon peak hours, and avoid residential
  neighborhoods to the maximum extent feasible.
- Obtain all necessary permits from the appropriate agencies for work within the road right-of-way for use of oversized/overweight vehicles which may require Caltrans Highway Patrol or a pilot car escort.
- 8. Submit plans for any work on the proposed road improvements to the County and Caltrans for review and approval prior to the issuance of any encroachment or road improvement permit for the work.
- 9. Clean or remove any material that is deposited onto the roadways as soon as possible and at least prior to the end of each working day.
- 10. Obtain any access easements from private property owners necessary to perform required repair work.

**MM TRA-2:** Prior to the issuance of construction or building permits, the project proponent/operator shall provide a written statement of any movement of oversized/overweight vehicles that would require transport over publicly maintained State or County roads. The following shall be implemented for any such transport:

1. Obtain all necessary encroachment permits for work within the road right of-way, or use of oversized/overweight vehicles that will utilize County maintained roads, which may require



### **CalCapture CCS Project – Transportation Impact Analysis**

8 Mitigation Measures

California Highway Patrol or a pilot car escort. Copies of the approved traffic plan and issued permits shall be submitted to CEC, the Kern County Planning and Natural Resources Department and the Kern County Public Works Department-Development Review.



## 9 Conclusion

As described in the Project description, construction equipment and vehicles would access the Project site from the south via SR 119 exit on I-5, Valley West Road, Elk Hills Road, and Skyline Road; from the north, the Project site could be accessed via SR 58 exit on I-5, Wasco Way, Brite Road, Buttonwillow Drive, Elk Hills Road, and Skyline Road. From the Bakersfield area, the Project site could be accessed via SR 58 to either of the preceding routes leading to the Project site. The two additional temporary staging and parking areas that are located approximately 5.5 miles southeast of the Project site could also be accessed via SR 119 exit on I-5.

Under existing traffic conditions, all roadway study segments currently operate at LOS C or better, which meets Kern County's target threshold of LOS D. During construction, with the addition of construction traffic on the Study Area roadway segments the AADT for each affected roadway would be at or below LOS D thresholds, which indicates that there would not be impacts to the roadway segments. After construction, the Project would have up to 16 full-time employees that would generate approximately 40 trips per day, which is generally not perceptible and would not result in impacts to the surrounding roadway network. VMT associated with construction of the Project is addressed in the context of air quality and greenhouse gas as part of a separate study. Construction VMT is temporary and is not applicable to the transportation impact thresholds of significance.

The Project is consistent with the Kern County General Plan and SCS and generates substantially fewer daily operational trips than the 110 trips per day threshold of significance for VMT impact. Therefore, based on the OPR recommended screening criteria, the Project would have a less-than-significant transportation impact.



## 10 References

- Kern Council of Governments (Kern COG) Transportation Data Management System. Accessed January 2025. Available at: https://kerncog.public.ms2soft.com/tcds/tsearch.asp?loc=Kerncog&mod=TCDS.
- Kern County Planning and Natural Resources Department (Kern County). 2009. General Plans & Elements

   Kern County Planning and Natural Resources Department. Accessed January 2025. Available at:
  https://kernplanning.com/planning/planning-documents/general-plans-elements/
- ——. 2025. Environmental Documents Kern County Planning & Natural Resources Dept. Accessed January 2025. Available at: https://kernplanning.com/planning/environmental-documents/
- Governor's Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA.

Transportation Research Board, National Research Council. 2016. Highway Capacity Manual. Sixth Edition.

U.S. Department of Transportation Federal Highway Administration. 2017. Simplified Highway Capacity Calculation Method for the Highway Performance Monitoring System. October 2017.



# **Appendices**



Project: 185806775

### **Appendix A Traffic Counts Data Sheets**



Project: 185806775 A-1

CITY: Kern County

Wednesday, May 07, 2025

ADT1 Wasco Way south of SR-58.

PROJECT: SC5383

AM Period	NB		SB				PM Period	NB		SB			
0:00	1		0				12:00	10		2			
0:15	1		1				12:15	9		13			
0:30	0		0				12:30	10		8			
0:45	0	2	0	1		3	12:45	6	35	5	28		63
1:00	0		0				13:00	8		3			
1:15	0		0				13:15	6		4			
1:30	0		0				13:30	6		8			
1:45	0	0	0	0			13:45	10	30	7	22		52
2:00	1		1				14:00	2		7			
2:15	0		0				14:15	10		4			
2:30 2:45	0	1	0	1		2	14:30 14:45	26 12	50	11 14	36		86
				1					30		30		00
3:00 3:15	1 0		0				15:00 15:15	19 11		9 12			
3:30	0		2				15:30	12		7			
3:45	0	1	0	3		4	15:45	17	59		35		94
4:00	2		1				16:00	7		11			
4:15	1		5				16:15	13		6			
4:30	4		6				16:30	17		8			
4:45	3	10	3	15		25	16:45	13	50	15	40		90
5:00	2		6				17:00	11		6			
5:15	10		12				17:15	16		10			
5:30	9		16				17:30	6		6			
5:45	4	25	11	45		70	17:45	4	37	4	26		63
6:00	8		18				18:00	7		0			
6:15	5		19				18:15	4		3			
6:30 6:45	8 12	33	12	61		94	18:30 18:45	6 3	20	4	11		31
		33		01		34			20		11		
7:00 7:15	6 11		8 8				19:00 19:15	1 6		2			
7:30	3		9				19:30	2		7			
7:45	10	30		31		61	19:45	2	11		12		23
8:00	5		10				20:00	0		6			
8:15	6		7				20:15	3		1			
8:30	9		4				20:30	0		2			
8:45	6	26	7	28		54	20:45	2	5	4	13		18
9:00	4		6				21:00	2		4			
9:15	4		6				21:15	0		1			
9:30	8		2				21:30	2		0			
9:45	7	23	4	18		41	21:45	2	6	0	5		11
10:00	9		8				22:00	4		0			
10:15	6		3				22:15	2		1			
10:30	7	20	6	22		61	22:30	2	0	1	2		11
10:45	7	29		32		61	22:45	0	8	1	3		11
11:00 11:15	3 6		8 7				23:00 23:15	1		1 0			
11:30	9		5				23:30	0		0			
11:45	8	26		23		49	23:45	0	2		1		3
Total Vol.		206		258		464			313		232		545
iotai voi.		200		230		404			313		232	D. W. T. L.L.	343
									NB		SB	Daily Totals	Combined
								_	519		490		1009
					AM				525			РМ	2003
Split %		44.4%		55.6%	7.1.	46.0%		<u> </u>	57.4%		42.6%		54.0%
Peak Hour		6:30		5:30		6:00			14:30		14:30		14:30
Volume						94							
P.H.F.		37 0.77		64 0.84		94 0.90			68 0.65		46 0.82		114 0.77
					cs@aimtd.com			Tell	714 25	3 7888			

Wednesday, May 07, 2025 CITY: Kern County PROJECT: SC5383

#### ADT2 Brite Rd west of Mirasol Ave.

#### Prepared by AimTD LLC tel. 714 253 7888

AM Period	EB		WB			PM Period		EB		WB		
0:00	2		0			12:00		12		5		
0:15	2		0			12:15		9		7		
0:30	1		1			12:30		4		11		
0:45	1	6	1	2	8	12:45		5	30	1	24	54
1:00	0		0			13:00		9		4		
1:15	0		0			13:15		5		6		
1:30	0		0			13:30		12		6		
1:45	0	0	1	1	1	13:45		11	37	10	26	63
2:00	1		0			14:00		15		6		
2:15	0		0			14:15		22		3		
2:30	0		2			14:30		37		4		
2:45	0	1	1	3	4	14:45		29	103	15	28	131
3:00	0		0			15:00		29		9		
3:15	0		3			15:15		21		13		
3:30	0		1			15:30		25		15		
3:45	2	2	1	5	7	15:45		19	94	22	59	153
4:00	3		6			16:00		15		12		
4:15	3		8			16:15		25		13		
4:30	7		13			16:30		25		10		
4:45	5	18	16	43	61	16:45		10	75	9	44	119
5:00	8		14			17:00		12		10		
5:15	15		25			17:15		19		4		
5:30	18		48			17:30		12		8		
5:45	11	52	45	132	184	17:45		7	50	5	27	77
6:00	21		33			18:00		7		2		
6:15	22		26			18:15		6		3		
6:30	12		17			18:30		3		5		
6:45	3	58	17	93	151	18:45		3	19	3	13	32
7:00	8		12			19:00		4		2		
7:15	5		15			19:15		1		3		
7:30	4		8			19:30		4		5		
7:45	3	20	16	51	71	19:45		3	12	5	15	27
8:00	3		10			20:00		5		2		
8:15	8		6			20:15		2		0		
8:30	8		13			20:30		0		4		
8:45	7	26	4	33	59	20:45		5	12	3	9	21
9:00	2		6	- 55	- 55			0		6		
9:00 9:15	7		5			21:00 21:15		1		3		
9:30	4		5			21:30		0		0		
9:45	5	18	5	21	39	21:45		4	5	0	9	14
•		10		<u> </u>	33				<u>, , , , , , , , , , , , , , , , , , , </u>			17
10:00	13 7		6			22:00		3		1		
10:15 10:30	7		5 3			22:15 22:30		1 0		2 0		
10:45	10	37	5 5	19	56	22:30		0	4	0	3	7
	6	٠,٠			30				- '			,
11:00 11:15	6 7		11 7			23:00 23:15		1 2		0 2		
11:15	2		12			23:15		0		0		
11:45	4	19	0	30	49	23:30		1	4	1	3	7
	r											
Total Vol.		257		433	690				445		260	705
									Daily To	otals	14/15	
									EB		WB	Combined
									702		693	1395
		AM							PM			
Split %		37.2%	)	62.8%	49.5%				63.1%		36.9%	50.5%
Peak Hour		5:30		5:30	5:30				14:15		15:15	14:30
Volume		72		152	224				117		62	157
P.H.F.		0.82		0.79	0.85				0.79		0.70	0.89
		cs@a	imtd c	om			Tell. 714 253 7888					

cs@aimtd.com

Tell. 714 253 7888

CITY: Kern County

Wednesday, May 07, 2025

ADT3 Buttonwillow Dr south of Miraso.

PROJECT: SC5383

AM Period	NB		SB				PM Period	NB		SB			
0:00	2		0				12:00	10		5			
0:15	2		0				12:15	10		6			
0:30	1		0				12:30	2		7			
0:45	1	6	1	1		7	12:45	7	29	6	24		53
1:00	0		0				13:00	2		5			
1:15	0		0				13:15	5		8			
1:30	0		0				13:30	10		5			
1:45	0	0	1	1		1	13:45	8	25	7	25		50
2:00	1		0				14:00	18		6			
2:15	0		0				14:15	20		3			
2:30	0		2				14:30	33		4			
2:45	0	1	1	3		4	14:45	28	99	14	27		126
3:00	0		0				15:00	25		8			
3:15	0		4				15:15	20		12			
3:30	0		1				15:30	24		13			
3:45	3	3	1	6		9	15:45	26	95	34	67		162
4:00	2		6				16:00	10		11			
4:15	4		6				16:15	26		13			
4:30	5		15				16:30	18		9			
4:45	5	16		42		58	16:45	9	63	11	44		107
5:00	9		14				17:00	12		6			
5:15	16		26				17:15	20		9			
5:30	18		44				17:30	12		8			
5:45	14	57	45	129		186	17:45	5	49	4	27		76
6:00	21		27				18:00	10		3			
6:15	22		28				18:15	4		3			
6:30	12		15				18:30	4		4			
6:45	4	59	14	84		143	18:45	3	21	3	13		34
7:00	5		11				19:00	3		3			
7:15	5		17				19:15	2		1			
7:30	5		7				19:30	3		5			
7:45	2	17	18	53		70	19:45	3	11	6	15		26
8:00	9		15				20:00	4		2			
8:15	10		12				20:15	2		0			
8:30	5		6				20:30	0		4			
8:45	5	29	2	35		64	20:45	5	11	3	9		20
9:00	1		7				21:00	0		5			
9:15	5		5				21:15	1		3			
9:30	5		4				21:30	5		0			
9:45	5	16	6	22		38	21:45	2	8	1	9		17
10:00	12		6				22:00	2		2			
10:15	7		3				22:15	1		2			
10:30	7		3				22:30	0		0			
10:45	8	34		18		52	22:45	0	3	0	4		7
11:00	7		10				23:00	1		0			
11:15	5		8				23:15	1		1			
11:30	3		9				23:30	0		0			
11:45	3	18		30		48	23:45	1	3	1	2		5
Total Vol.		256	_	424		680			417		266		683
100011011		230				000			117		200	Daily Totals	333
								_	NB		SB	July 104410	Combined
								_	673		690		1363
					AM				-		-	PM	<del>-</del>
Split %		37.6%		62.4%	7	49.9%			61.1%		38.9%		50.1%
Peak Hour		5:30		5:30		5:30			14:15		15:30		15:00
Volume		75		144		219			106		71		162
P.H.F.		0.85		0.80		0.88			0.80		0.52		0.68
					cs@aimtd.com			Tell.		3 7888			

CITY: Kern County

Wednesday, May 07, 2025

ADT4 Elk Hills Rd north of Skyline Rd.

PROJECT: SC5383

AM Period	NB		SB				PM Period	NB		SB			
0:00	3		0				12:00	9		3			
0:15	0		0				12:15	6		4			
0:30	1		1				12:30	4		5			
0:45	0	4	0	1		5	12:45	7	26	6	18		44
1:00	1		0				13:00	5		6			
1:15	0		0				13:15	7		5			
1:30	0	_	0			_	13:30	12		8			
1:45	1	2	1	1		3	13:45	8	32	7	26		58
2:00	1		1				14:00	21		9			
2:15	0		0				14:15	30		4			
2:30 2:45	0	1	1 2	4		5	14:30 14:45	23 33	107	1 11	25		132
			0			<u> </u>			107	9	23		132
3:00 3:15	0		2				15:00 15:15	17 23		11			
3:30	2		2				15:30	23		14			
3:45	1	3	2	6		9	15:45	21	84	25	59		143
4:00	3		2				16:00	20		18			
4:15	3		7				16:15	19		15			
4:30	5		14				16:30	15		12			
4:45	5	16	14	37		53	16:45	9	63	8	53		116
5:00	9		15				17:00	13		6			_
5:15	16		19				17:15	20		9			
5:30	17		32				17:30	7		11			
5:45	15	57	49	115		172	17:45	9	49	5	31		80
6:00	26		29				18:00	9		4			
6:15	19		34				18:15	7		2			
6:30	7		17				18:30	2		3			
6:45	4	56	19	99		155	18:45	3	21	2	11		32
7:00	6		11				19:00	0		2			
7:15	4		18				19:15	1		1			
7:30	5	20	7			74	19:30	6	•	1	•		10
7:45	5	20	15	51		71	19:45	2	9	5	9		18
8:00	4		11				20:00	4		5			
8:15	7		9				20:15	0		1			
8:30 8:45	8	22	8 9	37		59	20:30 20:45	4	8	3	12		20
9:00			7	37		33					12		20
9:00	4 4		5				21:00 21:15	0		3			
9:30	6		4				21:30	2		3			
9:45	12	26		19		45	21:45	4	7	0	9		16
10:00	6		5				22:00	1		1			
10:15	8		7				22:15	1		1			
10:30	5		2				22:30	0		1			
10:45	9	28	5	19		47	22:45	0	2	0	3		5
11:00	5		7				23:00	1		0			
11:15	4		5				23:15	1		1			
11:30	3		11				23:30	0		0			
11:45	8	20	6	29		49	23:45	1	3	1	2		5
Total Vol.		255		418		673			411		258		669
												Daily Totals	
								_	NB		SB	-	Combined
									666		676		1342
					AM		<b>-</b>					PM	
Split %		37.9%		62.1%		50.1%			61.4%		38.6%		49.9%
Peak Hour		5:30		5:30		5:30			14:00		15:30		15:15
Volume		77		144		221			107		72		155
P.H.F.		0.74		0.73		0.86			0.81		0.72		0.84
					cs@aimtd.com			Tell.	714 25	3 7888			

Wednesday, May 07, 2025 CITY: Kern County PROJECT: SC5383

#### ADT5 Valley West Rd east of Elk Hills Rd.

AM     FM       Split %     23.5%     76.5%     55.9%     80.4%     19.6%     44.1%	AM Period	EB		WB			PM Period	 EB		WB		
0-95	0:00	4		1			12:00	 4		6		
0-05	0:15	3		0			12:15	6		3		
1.00	0:30	0		0			12:30	4		4		
1115	0:45	0	7	0	1	8	12:45	8	22	2	15	37
1115	1:00	0		1			13:00	6		5		
1.150	1:15			0								
								9				
		0	0	0	1	1		14	36	8	21	57
2-15		1		0				14		8		
2-65												
3.00			1		1	2			114		19	133
3.15											-	
3.30												
345												
4:00			0		7	7			89		15	104
Hand									- 55		-13	101
4:45												
1												
Sino			2		47	50			50		Q	ĘQ
Silf					4/	30			30		0	30
Sign												
Section   Sect												
6:00			_		1.42	1.40			25		0	4.4
6:15			5		143	148			35		9	44
6:30												
6.45												
7:00												
7:15	6:45		10	24	127	137	18:45	5	19	0	2	21
7:30	7:00	5		14			19:00	4		0		
7:45         4         25         8         39         64         19:45         1         15         1         16           8:00         5         8         20:00         1         0         8           8:15         9         8         20:15         0         0         0           8:30         6         6         6         20:30         2         1         4           9:00         5         4         21:00         3         1         4           9:00         5         4         21:00         3         1         4           9:30         5         13         21:30         1         6         2         8           9:30         5         13         21:30         1         6         2         8           10:00         6         5         22:200         4         1         1         1         2         8           10:45         5         21         6         30         51         22:45         0         4         1         2         6           11:10         7         6         23:00         0         0         1								6		0		
8:00				7				4		0		
8:15 9 8 20:15 0 0 0 8 8:30 6 6 6 20:30 2 1 8:45 5 25 9 31 56 20:45 0 3 0 1 4 9:00 5 4 21:00 3 1 1 9:45 1 6 0 2 8 9:30 5 13 21:30 1 1 1 1 9:45 7 19 5 30 49 21:45 1 6 0 2 8 10:00 10:30 5 12 22:30 0 0 0 0 10:45 10:45 5 21 6 30 51 22:45 0 4 1 2 6 11:01 11:15 8 2 2 23:15 0 0 0 0 11:45 8 2 23:15 0 0 0 0 11:415 8 2 2 23:15 0 0 0 0 11:415 8 2 2 23:15 0 0 0 0 11:45 8 2 23:30 0 0 0 0 11:45 8 30 5 18 48 23:45 1 1 0 1 2 2 6 11:45 8 30 5 18 48 23:45 1 1 1 0 1 2 2 6 11:45 8 30 5 18 48 23:45 1 1 1 0 1 2 2 6 11:45 8 30 5 18 48 23:45 1 1 1 0 1 2 2 6 11:45 8 30 5 18 48 23:45 1 1 1 0 1 2 2 6 11:45 8 30 5 18 48 23:45 1 1 1 0 1 2 2 6 11:45 8 30 5 18 48 23:45 1 1 1 0 1 1 2 2 6 1 11:45 8 30 5 18 48 23:45 1 1 1 0 1 1 2 2 6 1 11:45 8 30 5 18 48 23:45 1 1 1 0 1 1 2 2 6 1 11:45 8 30 5 18 48 23:45 1 1 1 0 1 1 2 2 6 1 11:45 8 30 5 18 48 23:45 1 1 1 0 1 1 2 2 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7:45	4	25	8	39	64	19:45	 1	15	1	1	16
8:30 6 6 6 7 20:30 2 1 8 8:45 5 25 9 31 56 20:45 0 3 0 1 4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	8:00	5		8			20:00	1		0		
8:45         5         25         9         31         56         20:45         0         3         0         1         4           9:00         5         4         21:00         3         1	8:15	9		8			20:15	0		0		
9:00	8:30	6		6			20:30	2		1		
9:15	8:45	5	25	9	31	56	20:45	0	3	0	1	4
9:30	9:00	5		4			21:00	3		1		
9:30	9:15	2		8			21:15	1		0		
10:00 6 5 22:00 4 1 1 10:15 5 7 22:15 0 0 0 10:30 5 12 22:30 0 0 0 10:45 5 21 6 30 51 22:45 0 4 1 2 6 11:00 7 6 23:00 0 1 11:15 8 2 23:15 0 0 0 11:30 7 5 23:30 0 0 0 11:45 8 30 5 18 48 23:45 1 1 0 1 2  Total Vol. 146 475 621 394 96 490  Peak Hour 7:30 5:30 5:30  Volume 30 175 181 12:00 1 127 29 141		5						1		1		
10:15	9:45	7	19	5	30	49	21:45	1	6	0	2	8
10:15	10:00	6		5				 4	-	1		
10:30												
10:45												
11:00 7 6 23:00 0 1 11:15 8 2 23:15 0 0 0 11:30 7 5 23:30 0 0 0 11:45 8 30 5 18 48 23:45 1 1 0 1 2  Total Vol. 146 475 621 394 96 490    Daily Totals   EB WB Combine   EB WB Combine			21		30	51			4		2	6
11:15												
11:30 7 5 23:30 0 0 0 1 2 1:45 8 30 5 18 48 23:45 1 1 0 1 2  Total Vol. 146 475 621 394 96 490    Daily Totals EB WB Combine												
11:45     8     30     5     18     48     23:45     1     1     0     1     2       Total Vol.     146     475     621     394     96     490       Daily Totals EB     WB     Combine       540     571     1111       AM       Split %     23.5%     76.5%     55.9%     80.4%     19.6%     44.1%       Peak Hour     7:30     5:30     5:30     14:15     13:30     14:15       Volume     30     175     181     127     29     141												
Total Vol.         146         475         621         394         96         490           Daily Totals EB         WB         Combine Co			30		18	48			1		1	2
AM         PM         Combine EB         WB         Combine COMBINE EB         WB         Combine COMBINE EB         Combine												
EB         WB         Combine           540         571         1111           AM         PM           Split %         23.5%         76.5%         55.9%         80.4%         19.6%         44.1%           Peak Hour         7:30         5:30         5:30         14:15         13:30         14:15           Volume         30         175         181         127         29         141	Total Vol.		146		475	621			394		96	490
540     571     1111       AM     PM       Split %     23.5%     76.5%     55.9%     80.4%     19.6%     44.1%       Peak Hour     7:30     5:30     5:30     14:15     13:30     14:15       Volume     30     175     181     127     29     141										otals		
AM         PM           Split %         23.5%         76.5%         55.9%         80.4%         19.6%         44.1%           Peak Hour         7:30         5:30         5:30         14:15         13:30         14:15           Volume         30         175         181         127         29         141											WB	Combined
Split %         23.5%         76.5%         55.9%         80.4%         19.6%         44.1%           Peak Hour         7:30         5:30         5:30         14:15         13:30         14:15           Volume         30         175         181         127         29         141											571	1111
Peak Hour     7:30     5:30     5:30     14:15     13:30     14:15       Volume     30     175     181     127     29     141			<u> </u>					 	PN	1		
<b>Volume</b> 30 175 <b>181</b> 127 29 <b>141</b>	Split %			0	76.5%	<b>55.9%</b>			80.4%	)	19.6%	44.1%
<b>Volume</b> 30 175 <b>181</b> 127 29 <b>141</b>	Peak Hour		7:30		5:30	5:30			14:15		13:30	14:15
<b>P.H.F.</b> 0.63 0.71 <b>0.70</b> 0.65 0.91 <b>0.62</b>												

### **Appendix B Kern County Cumulative Project List**



Project: 185806775 B-1

### **Table: Cumulative Projects List**

Name	Project Location	Project	Zone Map	Section Township Range	Approx Acreages	Status
Salt Creek Carbon Capture and Storage	West Lokern Road and Lost Hills Road	CCS	96	Multiple	4,000	Application Incomplete
CarbonFrontier Capture and Storage	Lerdo Hwy and SR 33	CCS	51/74/75/96	Multiple	12,362	EIR in Process
Eastridge Carbon Capture and Storage Project	China Grade Loop and Round Mountain Road	CCS	Multiple	Multiple	7,343	EIR in Process
Pond Road Biomass Carbon Removal and Storage Project	SR 99 and Pond Road	CCS	9-25	25/25S/25E	118	Application Incomplete
Avnos, Inc	Unknown (Elk Hills)	Direct Air Capture w/ CCS	Unknown	Unknown	20	Not Submitted (Media PR)
Lone Cypress Energy Services	Elk Hills Road and Skyline Road	Blue Hydrogen Project	112	35/30S/23E	28	Application Withdrawn
Oil and Gas Development under Kern County Oil and Gas Development	San Joaquin Valley Floor portion of Kern County	Revisions to Title 19 of the Kern County Zoning Ordinance	Multiple	Multiple	Multiple	Second Supplemental Recirculated EIR in Process
Crimson Resource Management Oil and Gas CUP	West of I-5, North SR 46, and East of Holloway Road	CUP Oil and Gas Extraction	4	34 and 35/25S/20E	800	Application Incomplete
AERA Energy South Belridge Oil and Gas CUP	Seventh Standard Road and SR 33	CUP Oil and Gas Extraction	74/75/96	Multiple	650	EIR in Process
CRC Oil and Gas CUP Buena Vista	SR 119 and Midway Road	CUP Oil and Gas Extraction	Multiple	Multiple	23,167	Application Incomplete
CRC Oil and Gas CUP Elk Hills	Skyline Road and SR 119	CUP Oil and Gas Extraction	Multiple	Multiple	54,196	Application Incomplete

### **Table: Cumulative Projects List**

Name	Project Location	Project	Zone Map	Section Township Range	Approx Acreages	Status
CRC Oil and Gas CUP Kern Front	SR 65 to the West, Southwest by James Road, and on the East by Granit Road	CUP Oil and Gas Extraction	81	Multiple	4,168	Application Incomplete
Holmes Western Oil and Gas CUP	Southeast of Maricopa and Taft	CUP Oil and Gas Extraction	206	Multiple	1,108	Application Incomplete
InEnTec (collaboration with CRC)	Unknown (Elk Hills)	Renewable Dimethyl either with CCS	Unknown	Unknown	Unknown	Not Submitted (Media PR)
Verde Clean Fuels (collaboration with CRC)	Unknown (Elk Hills)	Renewable Fuel Agricultural Waste/CCS	Unknown	Unknown	Unknown	Not Submitted (Media PR)
NLC Energy LLC	Unknown (Elk Hills)	Waste to Energy (CCS)	Unknown	Unknown	Unknown	Not Submitted (Media PR)
CTV Clean Energy Park	Unknown (Elk Hills)	Multiple Projects	Unknown	Unknown	Unknown	Not Submitted (Media PR)
Coles Levee Carbon Capture and Storage Project (CRC)	Unknown (North and South Coles Levee Oilfield)	CCS	Unknown	Unknown	Unknown	Not Submitted (Media PR)
Kern Store Carbon Capture and Storage Project (CRC)	Unknown (North and South Coles Levee Oilfield, Elk Hills Oilfield)	CCS	Unknown	Unknown	Unknown	Not Submitted (Media PR)
Lost Hills Solar to Hydrogen Project (Chevron New Energies)	South of Highway 46	Green Hydrogen Project	52-3	3/27N/21E	9	EIR in Process
Carbon TerraVault I (Kern County)	West of Elk Hills Road and North of Skyline Road	CCS	Multiple	Multiple	9,104	EIR Approved

### **Table: Cumulative Projects List**

Name	Project Location	Project	Zone Map	Section Township Range	Approx Acreages	Status
A2 Place Carbon Capture and Storage Project (CRC)	Unknown (North and South Coles Levee Oilfield, Elk Hills Oilfield	CCS	Unknown	Unknown	Unknown	Not Submitted (Media PR)
Capture of Existing Oilfield Steam Generators	Unknown	Carbon Capture and Transport for Storage	Unknown	Unknown	Unknown	Not Submitted (Media PR)
Existing Gas Power Plants (two)	Unknown	Carbon Capture and Transport for Storage	Unknown	Unknown	Unknown	Not Submitted (Media PR)
Direct Air Capture	Direct Air Unknown		Unknown	Unknown	Unknown	Not Submitted (Media PR)

Key:

CCS = carbon capture and storage

CUP = Conditional Use Permit

EIR = environmental impact report

I-5 = Interstate 5

PR = press release

SR = State Route

## Stantec

Stantec is a global leader in sustainable engineering, architecture, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.

